Self Diagnosis Supported model

SERVICE MANUAL

BA-5D CHASSIS

MODEL NAME	REMOTE COMMANDER	DESTINATION	CHASSIS NO.
KV-36FS100	RM-Y180	US	SCC-S65H-A
KV-36FS100	RM-Y180	CND	SCC-S64F-A
KV-36FS100	RM-Y180	HAWAII	SCC-S67B-A
KV-36FS200	RM-Y181	US	SCC-S65J-A
KV-36FS200	RM-Y181	HAWAII	SCC-S67C-A
KV-38FS200	RM-Y181	LATIN NORTH	SCC-S62M-A

KV-36FS200

RM-Y181

TRINITRON® COLOR TELEVISION

SONY®

9-965-933-02

SELF-DIAGNOSTIC FUNCTION

Self Diagnosis Supported model

The units in this manual contain a self-diagnostic function. If an error occurs, the STANDBY/TIMER LED will automatically begin to flash. The number of times the LED flashes translates to a probable source of the problem. A definition of the STANDBY/TIMER LED flash indicators is listed in the instruction manual for the user's knowledge and reference. If an error symptom cannot be reproduced, the Remote Commander can be used to review the failure occurrence data stored in memory to reveal past problems and how often these problems occur.

Diagnostic Test Indicators

When an error occurs, the STANDBY/TIMER LED will flash a set number of times to indicate the possible cause of the problem. If there is more than one error, the LED will identify the first of the problem areas.

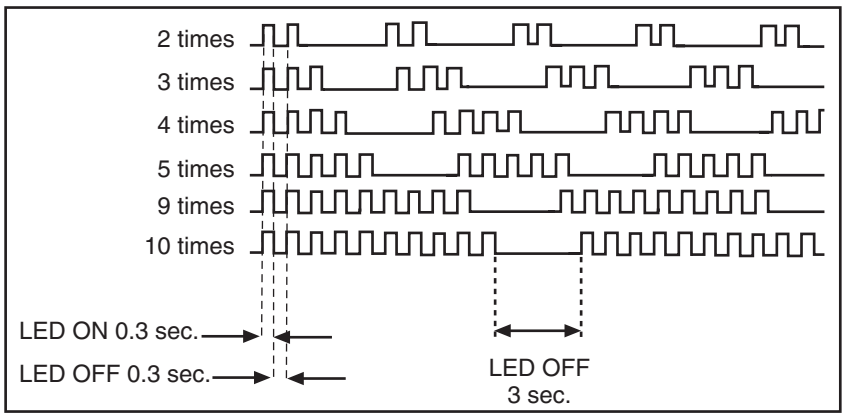
Results for all of the following diagnostic items are displayed on screen. If the screen displays a "0", an error has occurred.

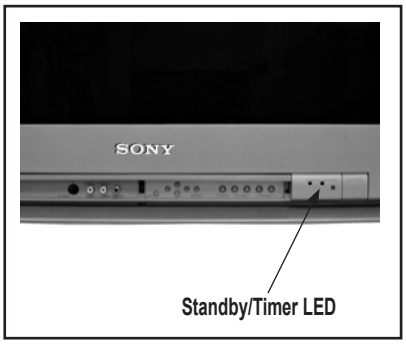
Diagnostic Item	No. of times STANDBY / TIMER lamp flashes	Probable Cause Location	Detected Symptoms
Power does not turn on	Does not light	• Power cord is not plugged in. • Fuse is burned out (F601). (GK Board)	• Power does not come on. • No power is supplied to the TV. • AC Power supply is faulty.
+B overcurrent (OCP)*	2 times	• H.OUT (Q502) is shorted. (A Board) • IC702 is shorted. (C Board)	• Power does not come on. • Load on power line shorted.
+B overvoltage (OVP)	3 times	• IC501 is faulty. (A Board) • If a high is supplied to pin 2 of IC501. (A Board)	• Has entered standby mode.
I-Prot	4 times	• +12V is not supplied. (A Board) • IC561 is faulty. (A Board)	• Has entered standby state after horizontal raster. • Vertical deflection pulse is stopped. • Power line is shorted or power supply is stopped.
IK (AKB)	5 times	• Video OUT (IC561) is faulty. (A Board) • IC702 is faulty. (C Board) • Screen (G2) is improperly adjusted. **	• No raster is generated. • CRT Cathode current detection reference pulse output is small.
Zero Cross	9 times	• No zero cross pulses on pin 45 IC1001. (A Board)	• Power does not come on.
9V Check	10 times	• Relay failed (RY600)	• Power does not come on.

* If a +B overcurrent is detected, stoppage of the vertical deflection is detected simultaneously. The symptom that is diagnosed first by the microcontroller is displayed on the screen.

** Refer to Screen (G2) adjustments in Section 2-4 of this manual

Display of Standby/Timer LED Flash Count





Diagnostic Item	Flash Count*
+B Overcurrent	2 times
+B Overvoltage	3 times
V-STOP	4 times
IK (AKB)	5 times
Zero Cross	9 times
9V	10 times

*One flash count is not used for self-diagnostic.

Stopping the Standby/Timer LED Flash

Turn off the power switch on the TV main unit or unplug the power cord from the outlet to stop the STANDBY/TIMER LAMP from flashing.

Self-Diagnostic Screen Display

For errors with symptoms such as “power sometimes shuts off” or “screen sometimes goes out” that cannot be confirmed, it is possible to bring up past occurrences of failure on the screen for confirmation.

To Bring Up Screen Test

In standby mode, press buttons on the Remote Commander sequentially, in rapid succession, as shown below:

DISPLAY ➡ Channel 5 ➡ Sound volume - ➡ Power ON.

SELF DIAGNOSIS	
2: +B OCP	0
3: +B OVP	0
4: VSTOP	0
5: AKB	1
9: ZCD	0
10: 9VON	0
101: WDT	0
Serial: xxxxxxx	
Model: xxxxxxx	

Numeral “0” means that no fault was detected.
Numeral “1” means a fault was detected one time only.

Handling of Self-Diagnostic Screen Display

Since the diagnostic results displayed on the screen are not automatically cleared, always check the self-diagnostic screen during repairs. When you have completed the repairs, clear the result display to “0”.
Unless the result display is cleared to “0”, the self-diagnostic function will not be able to detect subsequent faults after completion of the repairs.

Clearing the Result Display

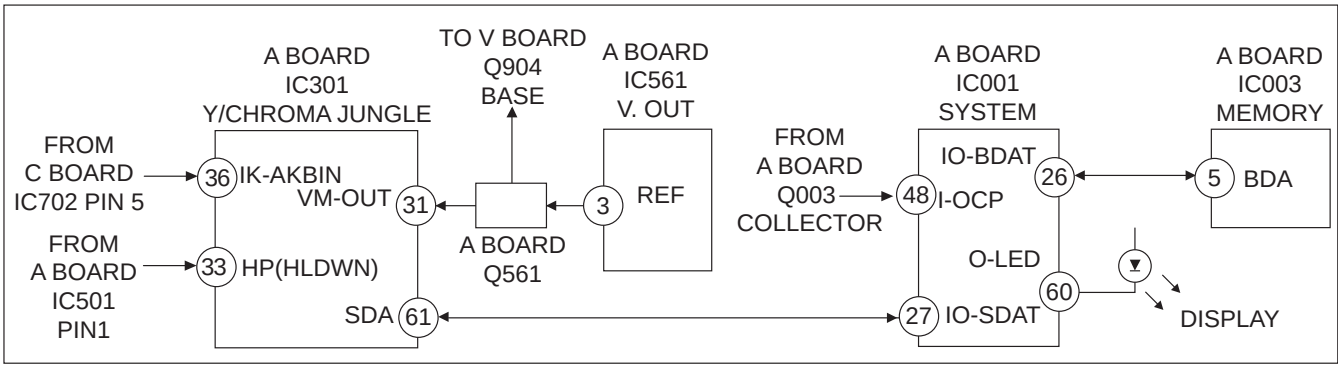
To clear the result display to “0”, press buttons on the Remote Commander sequentially when the diagnostic screen is displayed, as shown below:

Channel 8 ➡ ENTER

Quitting the Self-Diagnostic Screen

To quit the entire self-diagnostic screen, turn off the power switch on the Remote Commander or the main unit.

Self-Diagnostic Circuit



+B overcurrent (OCP)
Occurs when an overcurrent on the +B (135V) line is detected by pin 48 of IC001 (A Board). If the voltage of pin 48 of IC001 (A Board) is less than 1V when V.SYNC is more than seven verticals in a period, the unit will automatically turn off.

+B overvoltage (OVP)
Occurs when a high is felt onpin 2 of IC501 (A Board).

I-PROT
Occurs when an absence of the vertical deflection pulse is detected by pin 31 of IC301 (A Board). Power supply will shut down when waveform interval exceeds 2 seconds.

IK (AKB)
If the RGB levels* do not balance within 2 seconds after the power is turned on, this error will be detected by IC301 (A Board). TV will stay on, but there will be no picture.

*(Refers to the RGB levels of the AKB detection Ref pulse that detects 1K).

Zero Cross
Check Q691 collector (GK Board) 7.5V STBY goes to 0V when the set is turned on.

9V Check
Check Q691 collector (GK Board) 7.5V STBY goes to 0V when the set is turned on.

SECTION 4: CIRCUIT ADJUSTMENTS

ELECTRICAL ADJUSTMENTS BY REMOTE COMMANDER

Use the Remote Commander (RM-Y180, RM-Y181) to perform the circuit adjustments in this section.

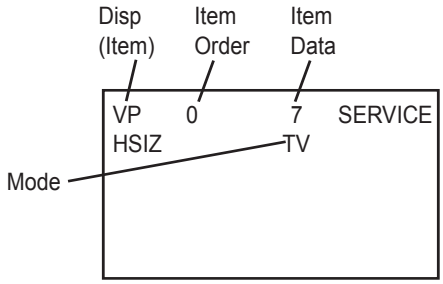
Test Equipment Required: 1. Pattern generator 2. Frequency counter 3. Digital multimeter 4. Audio oscillator

4-1. SETTING SERVICE ADJUSTMENT MODE

1. Standby mode (Power off).
2. Press the following buttons on the remote commander within a second of each other:

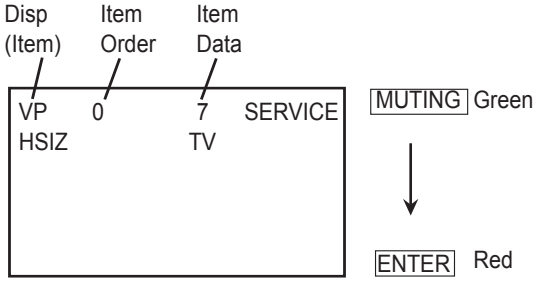
   DISPLAY → Channel 5 → Sound Volume + → Power

4-1-1. SERVICE ADJUSTMENT MODE IN

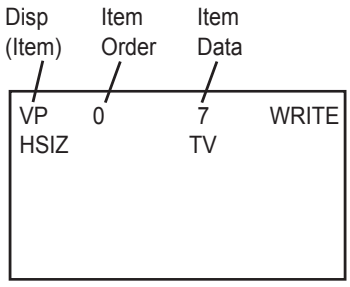


1. The CRT displays the item being adjusted.
2. Press 1 or 2 on the Remote Commander to select the item.
3. Press 3 or 6 on the Remote Commander to change the data.
4. Press MUTING then ENTER to write into memory.

4-1-2. SERVICE ADJUSTMENT MODE MEMORY



1. Press then on the Remote Commander to initialize.



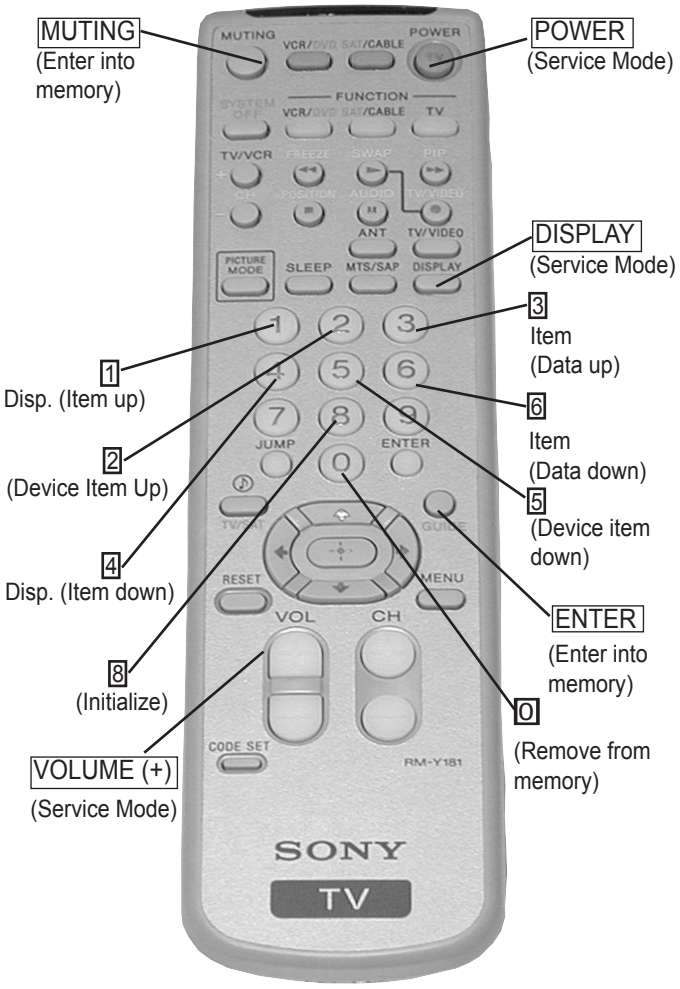
Carry out Step 1 when adjusting ID's 0-7 and when replacing and adjusting IC003.

2. DO NOT turn off set until SERVICE appears.

4-2. MEMORY WRITE CONFIRMATION METHOD

1. After adjustment, pull out the plug from the AC outlet, then replace the plug in the AC outlet again.
2. Turn the power switch ON and set to Service Mode.
3. Call the adjusted items again to confirm they were adjusted.

4-3. REMOTE ADJUSTMENT BUTTONS AND INDICATORS



RM-Y181

4-4. SERVICE DATA LISTS

Non-Volatile Memory (NVM) Reference for BA5D Service List

Service Group	No.	Name	Description	Common		
				Slave Addr	Sub Addr	Init Data
VERSION	0	VER	Microprocessor version information	=	=	0

Service Group	No.	Name	Fix / Var	Description	Common				NTSC / PAL-M			PAL-N		
					Slave Addr	Sub Addr	Fix Data	Var Data	Slave Addr	Sub Addr	Data	Slave Addr	Sub Addr	Data
VP1	0	HSIZ	Var	H SIZE (11/ 2-7)					A4	A8		A4	B4	
	1	HPOS	Var	HPOS (12 / 2-7)					A4	A9		A4	B5	
	2	VBOW	Var	AFC BOW (16 / 4-7)					A4	AE		A4	BA	
	3	VANG	Var	AFC ANGLE (16 / 0-3)					A4	AE		A4	BA	
	4	VTRP	Var	TRAPEZIUM (20 / 3-7)					A4	AF		A4	BB	
	5	HTRP	Var	H. TRAPEZOID (15 / 4-7)					A4	AD		A4	B9	
	6	TROT	Fix	TILT ROTATION (0-63)					A4	A4		A4	B0	
	7	PAMP	Var	PIN AMP (13 / 2-7)					A4	AA		A4	B6	
	8	UPIN	Var	UP-CPIN (14 / 2-7)					A4	AB		A4	B7	
	9	LPIN	Var	LO-CPIN (1C / 2-7)					A4	AC		A4	B8	
	10	VSIZ	Var	V SIZE (0E / 2-7)					A4	A5		A4	B1	
	11	VPOS	Var	V POSITION (0E / 2-7)					A4	A6		A4	B2	
	12	VLIN	Var	V LINEARITY (10 / 0-3)					A4	A7		A4	B3	
	13	SCOR	Var	S CORRECTION (10 / 4-7)					A4	A7		A4	B3	
	14	VZOM	Fix	16:9 CRT Z Mode on/off	A4	85								
	15	EHT	Fix	Vertical High-Voltage Compensation	A4	80								
	16	ASP	Fix	Aspect Ratio control (4:3 Mode)	A4	FB	47							
	17	ASP1	Fix	Aspect Ratio control (16:9 Mode)	A4	FC	47							
	18	SCRL	Fix	16:9 CRT Z Mode Trans. Scroll	A4	86								
	19	HBLK	Fix	Horizontal Blanking on/off	A4	85								
	20	LBLK	Fix	Left Blanking Adjustment	A4	80								
	21	RBLK	Fix	Rigth Blanking Adjustment	A4	81								
	22	HDW	Fix	Horizontal Drive Pulse Width	A4	85	1							
	23	EWDC	Fix	"Parabola" EW, D.C. Adjustment	A4	88	0							
	24	LVLN	Fix	Lower Screen BTM Vertical Line Adj.	A4	81								
	25	UVLN	Fix	Uppe Screen BTM Vertical Line Adj.	A4	82								
	26	INTL	Fix	INTERLACE	A4	84	0							
	27	HOSC	Fix	Horizontal VCO Oscillation Freq.	A4	82	7							
	28	VSS	Fix	Vertical Sync Slice Level	A4	84	0							
	29	HSS	Fix	Horizontal Sync Slice Level	A4	88	0							
	30	HMSK	Fix	For Macro Vision	A4	88	0							
	31	VTMS	Fix	Select Signal VTIM Pin	A4	85	0							
	32	TCMD	Fix	Vertical Count Down Mode Switching (for TV)	A4	8C	1							
	33	VCMD	Fix	Vertical Count Down Mode Switching (for Video)	A4	8D	3							
	34	AFC	Fix	AFC Loop Gain Switching	A4	86	0							
	35	FIFR	Fix	Field Frequency	A4	87	1							
	36	VBLK	Fix	VBLKW	A4	88	0							
	37	HTSW	Fix	H-Trap Switch : NEW	A4	88								

SERVICE DATA LISTS

Service Group	No.	Name	Fix / Var	Description	Common				NTSC			PAL-M			PAL-N		
					Slave Addr	Sub Addr	Fix Data	Var Data	Slave Addr	Sub Addr	Data	Slave Addr	Sub Addr	Data	Slave Addr	Sub Addr	Data
VP2	0	REFP	Fix	REFP	A4	88	0										
	1	JPSW	Fix	Jump SW	=	=											
	2	SHUE	Var	Sub HUE adjustment	A4	8C											
	3	SCOL	Var	Sub COLOR adjustment					A4	8E		A4	90	7	A4	92	
	4	SBRT	Var	Sub BRIGHTNESS adjustment	A4	87											
	5	AXPL	Fix	Axis PAL	A4	89	0										
	6	AXNT	Fix	Axis NTSC	A4	89	1										
	7	CBPF	Fix	Chroma BPF on/off	A4	89	1										
	8	CTRP	Fix	Y TRAP FILTER on/off	=	=											
	9	COFF	Fix	Color On/off	=	=											
	10	KOFF	Fix	Set Color Killer	A4	89	0										
	11	SSHP	Fix	Sub SHARPNESS	A4	83											
	12	TSPF	Fix	SHARPNESS Circuit Fo (for TV)	A4	8C											
	13	VSPF	Fix	SHARPNESS Circuit Fo (for Video)	A4	8D											
	14	PREL	Fix	Pre-Shoot/ Over-Shoot	A4	89	1										
	15	ABLM	Fix	ABL Mode Switch	A4	89	1										
	16	VTH	Fix	ABL CD VHT Switching	=	=											
	17	YDEL	Fix	Y Delay Time Control	A4	84											
	18	NCOL	Fix	No Color ID	A4	85											
	19	FSC	Fix	FSC Out on/off	A4	85	1										
	20	KID	Fix	Killer ID Control on/off	A4	85	0										

Service Group	No.	Name	Fix / Var	Description	Common				NTSC			PAL-M			PAL-N		
					Slave Addr	Sub Addr	Fix Data	Var Data	Slave Addr	Sub Addr	Data	Slave Addr	Sub Addr	Data	Slave Addr	Sub Addr	Data
VID_ADJ	0	RDRV	Var	R DRIVE (0A / 7-2)	A4	9E	41										
	1	GDRV	Var	G DRIVE (0B / 7-2)	A4	9F											
	2	BDRV	Var	B DRIVE (0C / 7-2)	A4	A0											
	3	RCUT	Var	R CUT OFF (07 / 7-2)	A4	A1	31										
	4	GCUT	Var	G CUT OFF (08 / 7-2)	A4	A2											
	5	BCUT	Var	B CUT OFF (09 / 7-2)	A4	A3											
	6	SCON	Var	Sub Contrast adjusment	A4	8A											
	7	CHUE	Var	Sub HUE adjustment for TV	A4	94	16										
	8	CCOL	Var	Sub COLOR adjustment for TV					A4	8F	18	A4	91	18	A4	93	23
	9	UOFS	Var	YUV U offset	A4	8B											
	10	VOFS	Var	YUV V offset	A4	8B											
	11	RON	Fix	R ON (01 / 3)	=	=											
	12	GON	Fix	G ON (01 / 2)	=	=											
	13	BON	Fix	B ON (01 / 1)	=	=											
	14	HUEV	Var	Sub HUE adjustment for Video	A4	8D											
	15	COLV	Var	Sub COLOR adjustment for Video					A4	8E		A4	90		A4	92	

SERVICE DATA LISTS

Service Group	No.	Name	Fix / Var	Description	Common		
					Slave Addr	Sub Addr	Fix Data
COL_TMP	0	GDOF	Fix	G DRIVE Offset	A4	9A	4
	1	BDOF	Fix	B DRIVE Offset	A4	9B	15
	2	GCOF	Fix	G CUT Offset	A4	9C	7
	3	BCOF	Fix	B CUT Offset	A4	9D	14
	4	DCOL	Fix	Dinamic Color	=	=	

Service Group	No.	Name	Fix / Var	Description	Common		
					Slave Addr	Sub Addr	Fix Data
PIC_IMP	0	BLAD	Fix	Black area detect (01 / 6-7)	A4	09	0
	1	SRTS	Fix	SRT level (01 / 4-5)	A4	09	3
	2	YNR	Fix	YNR(01 / 2)	A4	09	1
	3	GIRE	Fix	Gamma correction(01 / 0-1)	A4	09	3
	4	DAC1	Fix	DAC1(02 / 7)	A4	0A	0
	5	DAC2	Fix	DAC2(02 / 6)	A4	0A	0
	6	VMGA	Fix	VM on 1226 (02/5-4)	A4	0A	0
	7	GCUR	Fix	Gamma curve(02 / 2)	A4	0A	1
	8	BLKC	Fix	Black Compensation (02 / 1)	A4	0A	1
	9	TEST	Fix	TEST(03 / 6-7)	A4	0B	3
	10	RS	Fix	RS (03 / 3-5)	A4	0B	0
	11	RTC	Fix	RTC(03 / 0-2)	A4	0B	2
	12	APAC	Fix	APAC	A4	0B	0
	13	SRTH	Fix	SRT bit for Dynablack = High	A4	5C	1
	14	SRTL	Fix	SRT bit for Dynablack = Low	A4	5D	1
	15	SRTO	Fix	SRT bit for Dynablack = Off	A4	5E	0
	16	SHPH	Fix	Sharpness level for Dynablack = High	A4	5C	57
	17	SHPL	Fix	Sharpness level for Dynablack = Low	A4	5D	43
	18	SHPO	Fix	Sharpness level for Dynablack = Off	A4	5E	0

Service Group	No.	Name	Fix / Var	Description	Palette = VIVID			Palette = STANDARD			Palette = MOVIE			Palette = SPORTS		
					Slave Addr	Sub Addr	Fix Data	Slave Addr	Sub Addr	Fix Data	Slave Addr	Sub Addr	Fix Data	Slave Addr	Sub Addr	Fix Data
PALETTE	0	VPIC	Var	User picture setting 0:min, 63: max	A4	5F	63	A4	65	50	A4	6B	38	A4	71	63
	1	VBRT	Var	User brightness setting 0:min, 63: max	A4	60	31	A4	66	31	A4	6C	31	A4	72	31
	2	VCOL	Var	User color setting 0:min, 63: max	A4	61	35	A4	67	31	A4	6D	31	A4	73	40
	3	VSHP	Var	User sharpness setting 0:min, 63: max	A4	62	31	A4	68	31	A4	6E	34	A4	74	31
	4	VVM	Var	0: OFF, 1: Low, 2: High, 3: N/A	A4	5F	2	A4	65	1	A4	6B	0	A4	71	2
	5	VTRI	Var	0: Cool, 1: Nutral, 2: Warm, 3: N/A	A4	60	0	A4	66	1	A4	6C	2	A4	72	0
	6	VGMA	Var	0: OFF, 1: Low, 2: Mid, 3: Max	A4	63	2	A4	69	2	A4	6F	2	A4	75	2
	7	VNRM	Var	0: 3D, 1: 2D	A4	61	0	A4	67	0	A4	6D	0	A4	73	0
	8	VYDC	Var	DC Transmission Ratio 0,1: 100%, 2: 92%, 3: 85	A4	62	3	A4	68	3	A4	6E	2	A4	74	3
	9	VVEN	Var	Vertoca; Enhancement	A4	63	5	A4	69	3	A4	6F	3	A4	75	5
	10	VHK0	Var	Horizontal Peaking 0:On, 1:Off	A4	61	0	A4	67	0	A4	6D	0	A4	73	0
	11	VDBK	Var	User Dynablack 0: OFF, 1: Low, 2: High, 3: N/A	A4	63	2	A4	69	1	A4	6F	1	A4	75	1
	12	VYPL	Var	Y-Peaking Limit	A4	64	1	A4	6A	0	A4	70	0	A4	76	1

SERVICE DATA LISTS

Service Group	No.	Name	Fix / Var	Description	Common		
					Slave Addr	Sub Addr	Fix Data
3L_COMB	0	FUNN	Fix	Function (0 / 7-6) for NTSC	A4	3C	3
	1	FUNP	Fix	Function (0 / 7-6) for PAL-N, PAL-M	A5	3C	3
	2	DRNG	Fix	DRANG (0 / 2)	A4	3C	0
	3	YCSM	Fix	Y/C Sep Mode (0 / 1-0)	A4	3C	0
	4	CNRK	Fix	CNRK (1 / 7-6)	A4	3D	1
	5	CNRL	Fix	CNR Lim (1 / 5-4)	A4	3D	1
	6	CLPF	Fix	C-LPF(1 / 3)	A4	3D	1
	7	SLPF	Fix	SelC-LPF(1 / 2)	A4	3D	0
	8	MODE	Fix	Mode1 (1 / 1)	A4	3D	0
	9	YPG	Fix	Y - Peaking Gain (2 / 7-6)	A4	3E	3
	10	PDSC	Fix	Pds. Clip (2 / 3)	A4	3E	0
	11	YLPF	Fix	Y-LPF(2 / 2)	A4	3E	1
	12	VENL	Fix	V-Emph N.L (3 / 4-2)	A4	3F	4
	13	VEC	Fix	V - Emph Core (3 / 1-0)	A4	3F	3

Service Group	No.	Name	Fix / Var	Description	Common		
					Slave Addr	Sub Addr	Fix Data
3D_COMB	0	COUT	Fix	COUTS(00 / 2-3)	A4	21	3
	1	YAPS	Fix	YAPS(00 / 0-1)	A4	21	1
	2	NSDS	Fix	NSDS(01 / 4-5)	A4	22	0
	3	MSS	Fix	MSS(01 / 2-3)	A4	22	0
	4	KILS	Fix	KILS (01 / 1-0)	A4	22	1
	5	DYC	Fix	DYCOS (02 / 7-6)	A4	23	2
	6	EXAD	Fix	EXADINS(02 / 5)	A4	23	0
	7	EXCS	Fix	EXCSS(02 / 1- 0)	A4	23	1
	8	CPP	Fix	CPP(03 / 6)	A4	24	0
	9	HDP	Fix	HDP(03 / 3-5)	A4	24	6
	10	CDL	Fix	CDL(03 / 0-2)	A4	24	6
	11	DYCO	Fix	DYCOR(04 / 4-7)	A4	25	2
	12	DYGA	Fix	DYGAIN(04 / 0-3)	A4	25	10
	13	DCCO	Fix	DCCOR(05 / 4-7)	A4	26	2
	14	DCGA	Fix	DCGAIN(05 / 0-3)	A4	26	9
	15	YNRL	Fix	YNRLIM(06 / 4-5)	A4	27	1
	16	CNRL	Fix	CNRLIM(06 / 0-1)	A4	27	1
	17	ID1O	Fix	ID1ON(07 / 7)	A4	28	0
	18	ID1W	Fix	ID1W0A1(07 / 6)	A4	28	0
	19	ID1N	Fix	ID1W0A2(07 / 5)	A4	28	0
	20	WSC	Fix	WSC(08 / 6-7)	A4	29	1
	21	VTRH	Fix	VTRH(08 / 4-5)	A4	29	1
	22	VTRR	Fix	VTRR(08 / 2-3)	A4	29	1
	23	LDSR	Fix	LDSR(08 / 0-1)	A4	29	2
	24	WSS	Fix	WSS (09 / 7)	A4	2A	0
	25	ID1E	Fix	ID1ECON (09 / 6)	A4	2A	1
	26	TT	Fix	TT (09 / 4 -5)	A4	2A	0
	27	FELC	Fix	FELCHK (09 / 3)	A4	2A	1
	28	TH	Fix	TH (09 / 1 -2)	A4	2A	0
	29	VAPG	Fix	VAPGAIN(0A / 5-7)	A4	2B	3
	30	VAPI	Fix	VAPINV(0A / 0-4)	A4	2B	25

SERVICE DATA LISTS

Service Group	No.	Name	Fix / Var	Description	Common		
					Slave Addr	Sub Addr	Fix Data
3D_COMB	31	YPFT	Fix	YPFT(0B / 4-5)	A4	2C	3
	32	YPFG	Fix	YPFG(0B / 0-3)	A4	2C	8
	33	V1PS	Fix	V1PS(0C / 6-7)	A4	2D	3
	34	VEGS	Fix	VEGS(0C / 4-5)	A4	2D	2
	35	CC3N	Fix	CC3N(0C / 3)	A4	2D	0
	36	C0HS	Fix	C0HS(0C / 2)	A4	2D	0
	37	SEL2	Fix	SELD2FH(0C / 0)	A4	2D	1
	38	SEL1	Fix	SELD1FL(0D / 5)	A4	2E	1
	39	YHCO	Fix	YHCOR(10 / 6-7)	A4	31	0
	40	YHCG	Fix	YHCGAIN(10 / 5)	A4	31	1
	41	OVST	Fix	+OVST(10 / 3)	A4	31	0
	42	CSHD	Fix	CSHDT(10 / 2)	A4	31	0
	43	KCTT	Fix	KCTT(10 / 0-1)	A4	31	0
	44	SHT	Fix	SHT(11 / 7-6)	A4	32	0
	45	VCT	Fix	VCT(11/ 5)	A4	32	0
	46	CGAT	Fix	CLKGAT (11 / 4)	A4	32	0
	47	CG2D	Fix	CLK2D (11 / 3)	A4	32	1
	48	CGGT	Fix	CLKGGT (11 / 2)	A4	32	0
	49	CGEB	Fix	CLKGEB (11 / 1)	A4	32	0
	50	CGT	Fix	CLKGT (11 / 0)	A4	32	0
	51	HPLL	Fix	HPLLFS(12 / 7)	A4	33	1
	52	BPLL	Fix	BPLLFS (12 / 6)	A4	33	0
	53	FSCF	Fix	FSCFG(12 /5)	A4	33	0
	54	PLLF	Fix	PLLFG(12 / 4)	A4	33	1
	55	KILR	Fix	KILR(12 / 0-3)	A4	33	3
	56	HSSL	Fix	HSSL(13 / 4-7)	A4	34	12
	57	VSSL	Fix	VSSL(13 / 0-3)	A4	34	8
	58	BGPS	Fix	BGPS(14 / 4-7)	A4	35	4
	59	BGPW	Fix	BGPW(14 / 0-3)	A4	35	10
	60	ADCL	Fix	ADCLKS(15 / 6-7)	A4	36	3
	61	NSDW	Fix	NSDSW(15 / 4)	A4	36	1
	62	HIZE	Fix	HIZEN (16 / 4)	A4	37	0
	63	HCNT	Fix	HCNTFSYN (17 / 6)	A4	38	0

SERVICE DATA LISTS

Service Group	No.	Name	Fix / Var	Description	Common		
					Slave Addr	Sub Addr	Fix Data
PIP	0	PFRN	Fix	VCXO oscilation	A4	40	0
	1	PRVS	Fix	HD/VD input synchronous mode selection	A4	40	1
	2	PCON	Fix	PIP sub contrast control	A4	41	97
	3	PUCO	Fix	PIP U level control	A4	42	5
	4	PVCO	Fix	PIP V level control	A4	43	17
	5	PHUE	Fix	PIP sub hue control	A4	57	12
	6	PKIL	Fix	Color killer	A4	42	0
	7	PSEP	Fix	C-sync sep input selection	A4	44	1
	8	PDCN	Fix	Sub pic sync sep. Thereshold setting	A4	44	3
	9	PBGS	Fix	bgp position setting	A4	45	15
	10	PDL0	Fix	Y/C delay adjust (for video)	A4	46	11
	11	PDL1	Fix	Y/C delay adjust (for yuv)	A4	46	13
	12	PBRT	Fix	Y bryghtness control	A4	48	25
	13	PVP1	Fix	V pedestal level for YUV	A4	49	0
	14	PUP1	Fix	U pedestal level for YUV	A4	49	0
	15	PVP2	Fix	V pedestal level for main w/ burst	A4	4A	0
	16	PUP2	Fix	U pedestal level for main w/ burst	A4	4A	0
	17	PVP3	Fix	V pedestal level for main w/o burst	A4	4B	0
	18	PUP3	Fix	U pedestal level for main w/o burst	A4	4B	0
	19	PACS	Fix	0D, 0Eh setting mode	A4	4C	1
	20	PSYS	Fix	Color system	=	=	
	21	PSDL	Fix	Sync delay control	A4	4C	0
	22	PCCL	Fix	YUV color level	A4	4D	11
	23	PCGA	Fix	Croma gain	A4	4D	1
	24	PAAF	Fix	Auto AFC	A4	4D	1
	25	PSU2	Fix	For test	A4	4D	0
	26	PCVF	Fix	Internal 1H comb filter	A4	4D	0
	27	PBIT	Fix	Y clamp time constant	A4	4E	0
	28	PAFC	Fix	AFC time constant	A4	4E	0
	29	PACC	Fix	Color decoder amplitude	A4	4E	21
	30	PSDT	Fix	System automatic judgment	=	=	
	31	PBUR	Fix	VCXO mode selection	A4	4F	0
	32	PEVE	Fix	Main picture PAL-N	A4	4F	0
	33	PINW	Fix	Invert sub picture field definition	A4	4F	0
	34	PINR	Fix	Invert main picture field definition	A4	4F	0
	35	PVMD	Fix	Vertical display mode when pal-n	=	=	
	36	PREF	Fix	Main picture field fix	A4	4F	0
	37	PARE	Fix	Automatic 50/60 Hz judgement	A4	4F	0
	38	PBWD	Fix	BW det. Treshold setting	A4	50	1
	39	PFRA	Fix	Freq. Adjustment for free run mode	A4	51	0
	40	PPAL	Fix	Parameter setting for PAL-M judgment	A4	52	52
	41	PHPO	Var	Sub picture h position	A4	58	3
	42	PVPO	Fix	Sub picture v position	A4	59	22
	43	PHTI	Fix	Display timing adjust	A4	44	6
	44	PHAJ	Fix	Main/Sub switch delay control	A4	47	2
	45	PBGY	Fix	Back ground Y level setting	A4	53	0
	46	PCRO	Fix	Sub picture read mode	A4	54	0
	47	PPAR	Fix	Thereshold contol for ident judgement of sub	A4	50	1
	48	PHPF	Fix	Y output HPF	A4	51	0
	49	PFSC	Fix	FSC output	A4	43	0
	50	PVCH	Fix	15h,16h,17h, setting mode	A4	4C	0
	51	PVON	Fix	V-chip decode mode	A4	53	1
	52	PVLN	Fix	V-chip data slicer line selection	A4	54	17
	53	PVSB	Fix	V-chip data slicer start bit detection parameter	A4	55	64
	54	PVLV	Fix	V-chip data slicer slice parameter	A4	56	130
	55	SUSW	Fix	Sub-Unlock bit position switch	A4	59	0

SERVICE DATA LISTS

Service Group	No.	Name	Fix / Var	Description	Slave Addr	Sub Addr	Fix Data	Init Data
AP	0	SBAL	Fix	Sub Balance	A8	41		4
	1	SBAS	Fix	Sub Bass	A8	43		4
	2	STRE	Fix	Sub Treble	A8	42		0
	3	SRL	Fix	Surround level	A8	44		0
	4	BBOH	Fix	Surround Off - BBE high	A8	45		10
	5	BBOL	Fix	Surround Off - BBE low	A8	45		5
	6	BBSH	Fix	Simulated - BBE high	A8	46		0
	7	BBSL	Fix	Simulated - BBE low	A8	46		0
	8	BBMH	Fix	Surround - BBE high	A8	47		0
	9	BBML	Fix	Surround - BBE low	A8	47		0
	10	BBGH	Fix	WOW - BBE high	A8	48		6
	11	BBGL	Fix	WOW - BBE low	A8	48		9
	12	BBTH	Fix	Trusurround - BBE high	A8	49		7
	13	BBTL	Fix	Trusurround - BBE low	A8	49		8
	14	VFIX	Fix	Audio output fix data	A8	4A		236
	15	AGCL	Fix	AGC Level	A8	44		2

Service Group	No.	Name	Fix / Var	Description	Common		
					Slave Addr	Sub Addr	Fix Data
CCD	0	DUM0	Fix	Only for testing	=	=	
	1	VOSD	Fix	Only for testing	=	=	

Service Group	No.	Name	Fix / Var	Description	Common		
					Slave Addr	Sub Addr	Fix Data
OP	0	DISP	Fix	OSD Display position	A4	06	28
	1	RAMW	Fix		=	=	
	2	ICMP	Fix	Comparison data to determine Non-interlace signal for OSD	A4	39	4
	3	IPOR	Fix	0:Even, 1: Odd, Other: do not change	A4	3A	1
	4	FAWD	Fix	1: Forced to auto wide mode, 0:normal	A0	5D	0
	5	HCLW	Fix	H-Count Lower limit	A4	02	67
	6	HCHG	Fix	H-Count Higher limit	A4	03	254
	7	9VTM	Fix	Delay for 9V check subsystem	A4	04	55
	8	ZDET	Fix	Zero detect relay delay	A4	05	123

Service Group	No.	Name	Fix / Var	Description	Slave Addr	Sub Addr	Var Data
ID	0	ID0	Fix	Model variation ID0	A4	78	SEE ID MAP
	1	ID1	Fix	Model variation ID1	A4	79	SEE ID MAP
	2	ID2	Fix	Model variation ID2	A4	7A	SEE ID MAP
	3	ID3	Fix	Model variation ID3	A4	7B	SEE ID MAP
	4	ID4	Fix	Model variation ID4	A4	7C	SEE ID MAP
	5	ID5	Fix	Model variation ID5	A4	7D	SEE ID MAP
	6	ID6	Fix	Model variation ID6	A4	7E	SEE ID MAP
	7	ID7	Fix	Model variation ID7	A4	7F	SEE ID MAP

To determine ID's value, ID map must be refered

4-5. ID MAP TABLE

Model	Destination	ID-O	ID-1	ID-2	ID-3	ID-4	ID-5	ID-6	ID-7
KV-36FS100	US	89	31	73	98	14	0	0	16
KV-36FS100	CND	89	31	73	82	14	0	0	16
KV-36FS100	HAW	89	31	73	98	14	0	0	16
KV-36FS200	US	89	31	73	98	14	0	6	16
KV-36FS200	HAW	89	31	73	98	14	0	6	16
KV-38FS200	LATIN NORTH	81	31	201	194	45	0	6	80

4-6. A BOARD ADJUSTMENTS

4-6-1. H. FREQUENCY (FREE RUN) CHECK

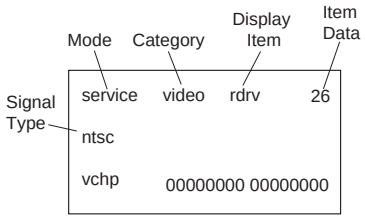
1. Input a TV mode (RF) with no signal.
2. Connect a frequency counter to base of Q501 (TP-25 H. DRIVE) on the A Board.
3. Check H. Frequency for 15734 ± 400/-200 Hz.

4-6-2. V. FREQUENCY (FREE RUN) CHECK

1. Select video 1 with no signal input.
2. Set the conditions for a standard setting.
3. Connect the frequency counter to TP-27 (V OUT) or CN501 pin ⑥ (V DY+) and ground on the A Board .
4. Check that V. Frequency shows 60 ± 5 Hz.

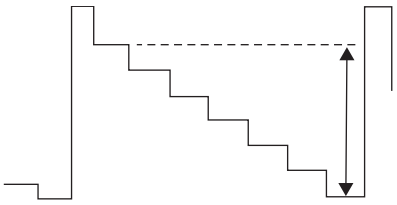
4-6-3. SUBCONTRAST ADJUSTMENT (RDRV)

1. Input a color-bar signal and set the level to 75%.
2. Set in Standard mode.
3. Activate the Service Adjustment Mode. Set color min, pic max.
4. Set GON and BON items. Using 3 and 6 set each to the following values. Leave RON set to “1”.



R ON: ON (1)
G ON: OFF (0)
B ON: OFF (0)

5. Connect an oscilloscope probe to C Board, CN705 pin 3 (Red Out) (TP35).
6. Select SCON with 1 and 4 .
7. Adjust the value of SCON with 3 and 6 for 1.95 ± 0.05Vpp.



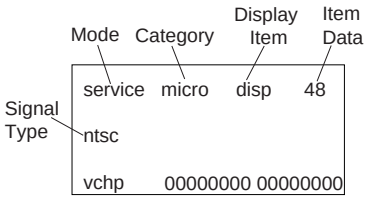
8. After adjusting SCON, if still out of spec, use RDRV registor as a fine adjustment.
9. Reset GON and BON values to “1”.

R ON: ON (1)
G ON: ON (1)
B ON: ON (1)

10. Press MUTING then ENTER to save into the memory.

4-6-4. DISPLAY POSITION ADJUSTMENT (DISP)

1. Input a color-bar signal.
2. Set to Service Adjustment Mode.
3. Select DISP with 1 and 4 .
4. Adjust values of DISP with 3 and 6 to adjust characters to the center.
5. Write to memory by pressing MUTING then ENTER .
6. Check to see if the text is displayed on the screen.

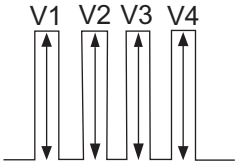


4-6-5. SUB BRIGHT ADJUSTMENT (SBRT)

1. Input a monoscope signal.
2. Activate the Service Adjustment Mode.
3. Set the PICTURE and BRIGHTNESS to minimum.
4. Select the SBRT item with 1 and 4 .
5. Adjust the values of SBRT with 3 and 6 to obtain a faintly visible crosshatch.
6. Press MUTING then ENTER to save into the memory.

4-6-6. SUB HUE, SUB COLOR ADJUSTMENT (SHUE, SCOL)

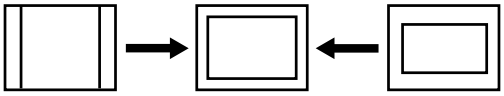
1. Input color-bar signal at 75%.
2. Activate the Service Adjustment Mode.
3. Set (PIC) to Max and (COL) to 50%.
4. Connect an oscilloscope probe to C Board, CN705Pin ④ Blue Out.
5. Select the SHUE and SCOL item with 1 and 4 .
6. While showing the SHUE item, adjust the waveform with 1 and 4 until the second and third bars show the same level (V2 = V3 < 0.15Vp-p).
7. While showing the SCOL item, adjust the waveform with 3 and 6 until the first and fourth bars show the same level (V1 = V4 < 0.15Vp-p). Increase 1 step after adjustment.



8. Press MUTING then ENTER to save into the memory.

4-6-7. V. SIZE ADJUSTMENT (VSIZ)

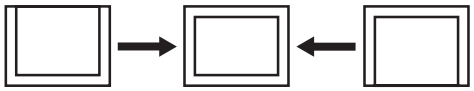
1. Input a crosshatch signal.
2. Activate the Service Adjustment Mode.
3. Select the VSIZ item with 1 and 4 .
4. Adjust value of VPOS with 1 and 4 for the best vertical center.
5. Press MUTING then ENTER to save into the memory.



4-6-8. V. CENTER ADJUSTMENT (VPOS)

Perform this adjustment after performing H. Frequency (Free Run) Check.

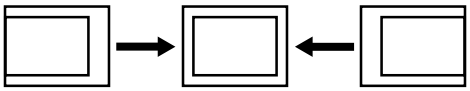
1. Input a crosshatch signal.
2. Activate the Service Adjustment Mode.
3. Select the VPOS item with 1 and 4 .
4. Adjust value of VPOS with 3 and 6 for the best vertical center.
5. Press MUTING then ENTER to save into the memory.



4-6-9. H. CENTER ADJUSTMENT (HPOS)

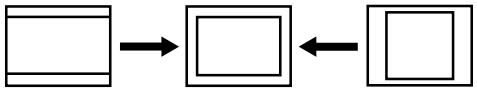
Perform this adjustment after performing H. Frequency (Free Run) Check.

1. Input a crosshatch signal.
2. Activate the Service Adjustment Mode.
3. Select the HPOS item with 1 and 4 .
4. Adjust the value of HPOS with 3 and 6 for the best horizontal center.
5. Press MUTING then ENTER to save into the memory.



4-6-10. H. SIZE ADJUSTMENT (HSIZ)

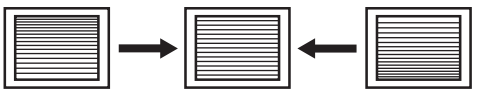
1. Input a monoscope signal.
2. Activate the Service Adjustment Mode.
3. Select HSIZ with 1 and 4 .
4. Adjust with 3 and 6 for the best horizontal size.
5. Press MUTING then ENTER to save into the memory.



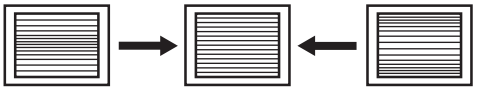
4-6-11. V. LINEARITY (VLIN), V. CORRECTION (SCOR), PIN AMP (PAMP), AND HORIZONTAL TRAPEZOID (HTRP) ADJUSTMENTS

1. Input a crosshatch signal.
2. Activate the Service Adjustment Mode.
3. Select VLIN, SCOR, PAMP, and HTRP with with 1 and 4.
4. Adjust with 3 and 6 for the best horizontal size.
5. Press MUTING then ENTER to save into the memory.

V LINEARITY (VLIN)

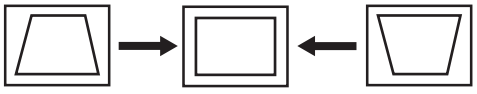


V CORRECTION (SCOR)



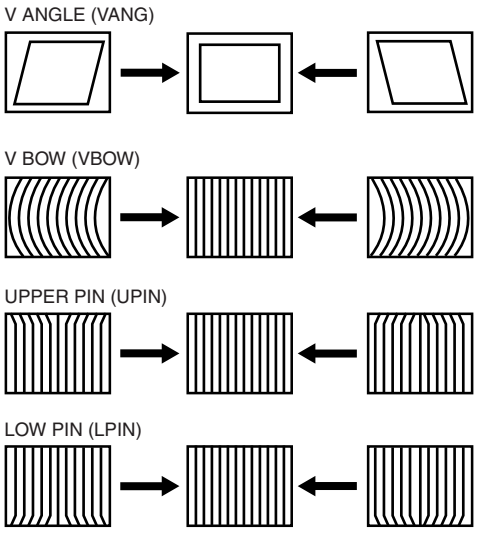
PIN AMP (PAMP)

HORIZONTAL TRAPEZOID (HTRP)



4-6-12. V. ANGLE (VANG), V. BOW (VBOW), UPPER PIN (UPIN) AND LOW PIN (LPIN) ADJUSTMENTS

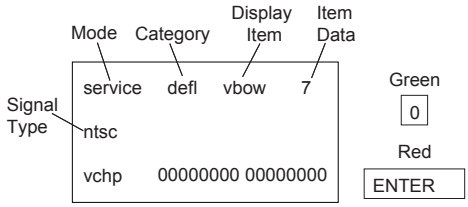
1. Input a crosshatch signal.
2. Activate the Service Adjustment Mode.
3. Select VANG, VBOW, UPIN, and LPIN with 1 and 4.
4. Adjust with 3 and 6 for the best picture.
5. Press MUTING then ENTER to save into the memory.



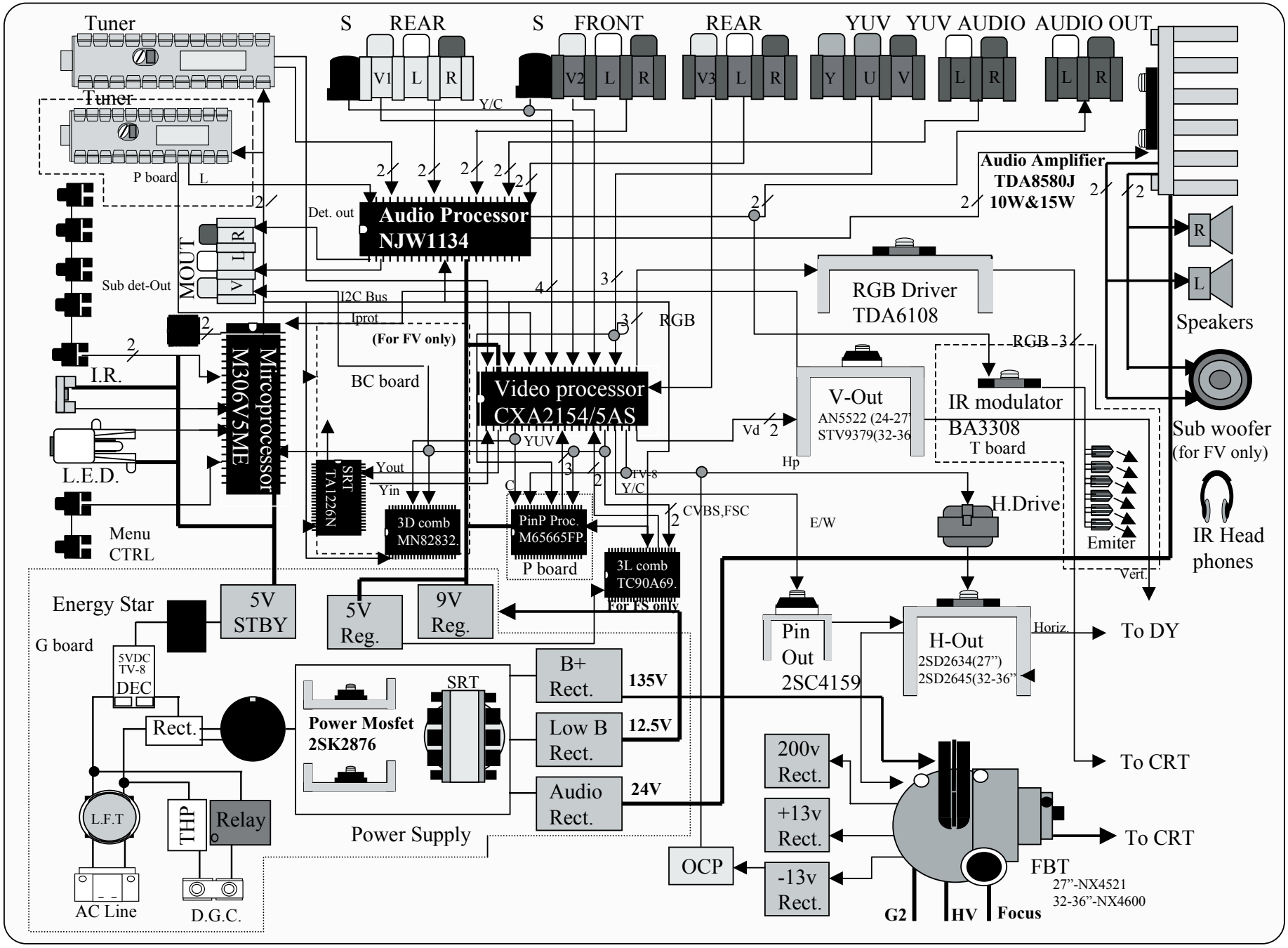
4-6-13. SERVICE ADJUSTMENT MODE MEMORY

1. After completing all adjustments, press 0 then ENTER .

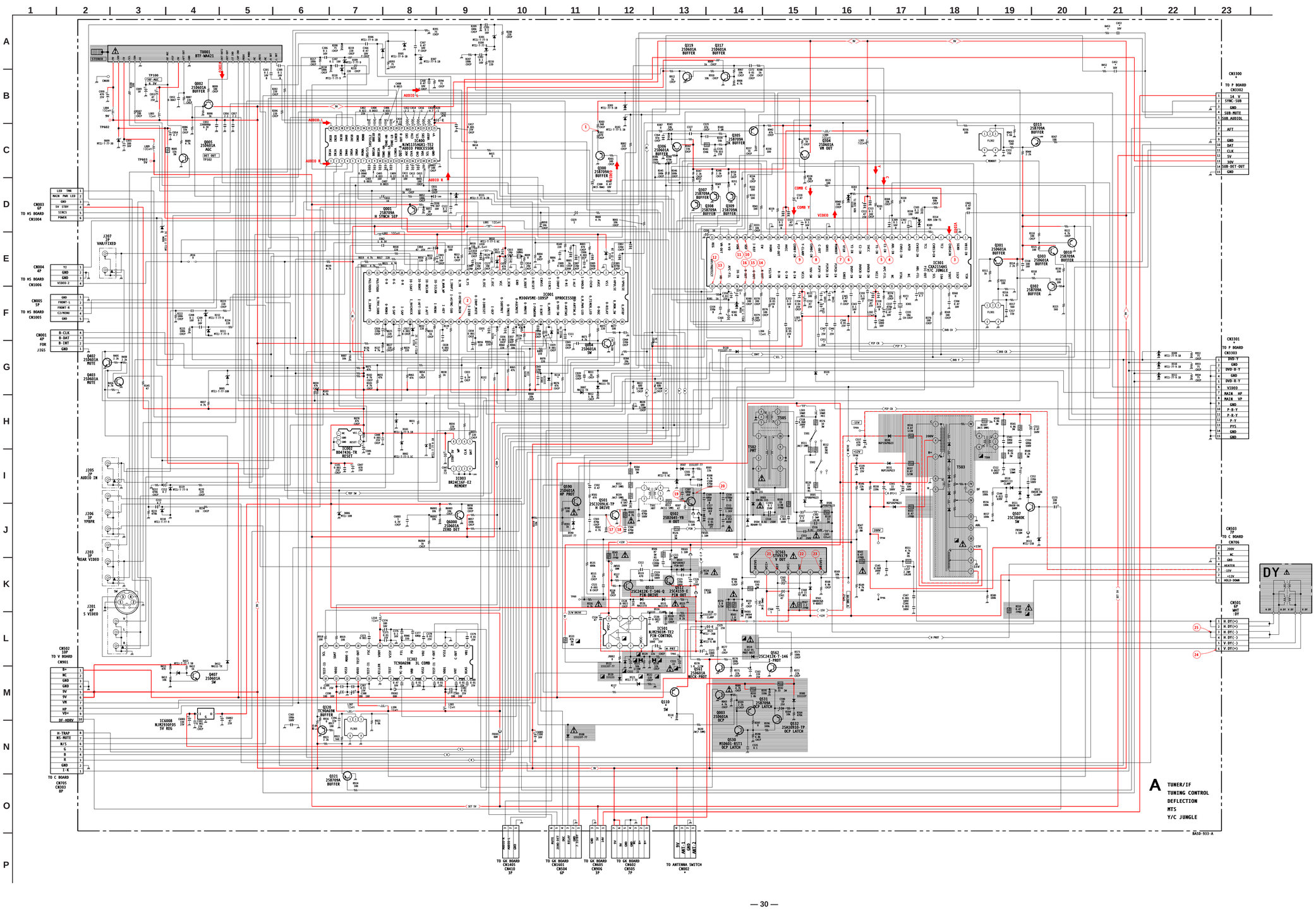
Read From Memory



5-3. BLOCK DIAGRAMS AND SCHEMATICS



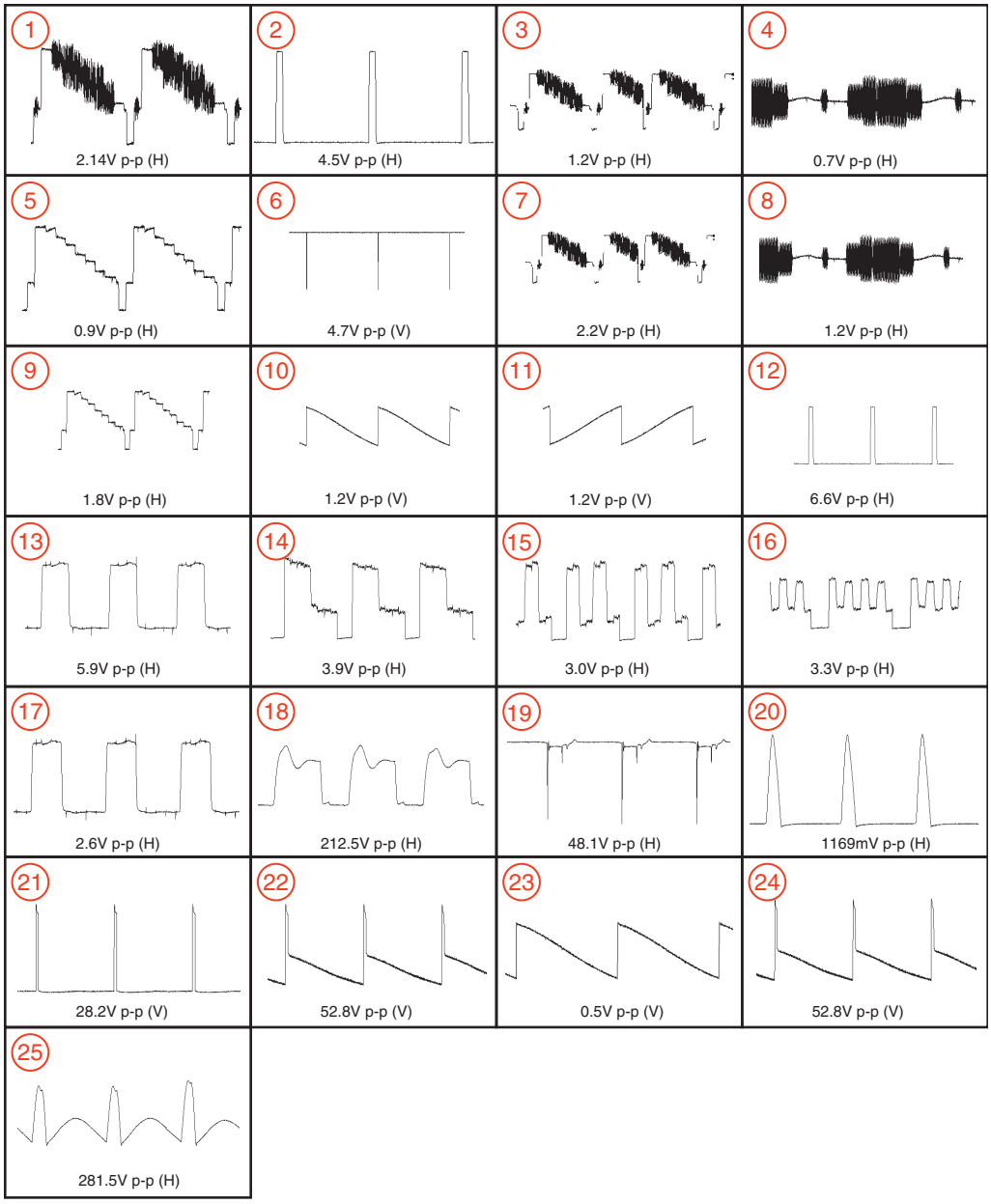
A BOARD SCHEMATIC DIAGRAM



A BOARD LOCATOR LIST

DIODE		D502	H-8	TRANSISTOR	
D002	C-2	D503	H-7	Q001	B-8
D004	F-1	D504	I-7	Q002	B-9
D005	D-2	D505	H-5	Q003	D-3
D006	F-1	D506	H-5	Q004	D-3
D007	B-4	D507	H-2	Q005	A-10
D008	B-3	D508	D-2	Q010	E-8
D009	E-8	D510	F-8	Q110	A-4
D010	B-3	D511	F-8	Q300	B-8
D100	B-4	D512	F-9	Q301	B-8
D101	B-4	D513	F-9	Q302	C-7
D102	C-2	D515	G-4	Q303	D-7
D110	B-5	D516	G-3	Q304	D-5
D111	B-2	D518	H-2	Q305	C-4
D112	B-2	D519	F-9	Q306	D-4
D113	D-3	D520	F-2	Q307	C-5
D200	D-11	D521	F-2	Q308	D-5
D201	B-11	D522	F-3	Q309	C-5
D209	C-11	D523	H-2	Q313	D-8
D210	C-11	D524	G-2	Q317	G-2
D211	D-11	D530	F-8	Q319	G-2
D212	D-11	D531	F-10	Q320	D-8
D218	F-12	D534	G-9	Q321	C-7
D219	F-12	D535	G-3	Q402	E-12
D303	B-11	D536	G-3	Q403	E-11
D304	C-5	D561	G-7	Q407	E-5
D305	C-9	D580	E-3	Q501	H-2
D306	C-11	D590	F-2	Q502	H-9
D307	C-9	IC		Q507	F-8
D309	B-10	IC001	C-3	Q511	G-3
D310	B-11	IC002	C-2	Q512	F-3
D311	B-10	IC003	B-4	Q530	D-3
D320	A-7	IC301	C-6	Q531	D-3
D410	C-2	IC302	C-9	Q532	F-3
D412	E-5	IC400	D-10	Q561	F-6
D413	E-4	IC501	G-2	Q562	F-5
D415	D-4	IC561	G-6	Q590	F-2
D501	G-2	IC6008	D-1	Q6000	C-1

A BOARD WAVEFORMS



A MARK(*) LIST

REF. NO.	LOCATION	KV-36FS100	KV-36FS200 38FS200(N)
C035	F-9	#	0.001UF
C111	F-11	#	220PF
C346	F-16	#	0.01UF 25V
C347	F-16	#	0.01UF 25V
C348	F-16	0.01UF 25V	#
C349	F-16	0.01UF 25V	#
C350	F-16	0.01UF 25V	#
C351	F-15	#	0.01UF 25V
C452	A-21	#	0.1UF 16V
C453	A-21	#	0.1UF 16V
CN002	P-13	#	1-564-507-11
CN3300	C-23	#	1-691-616-21
CN3301	G-23	#	1-691-616-21
D320	G-16	#	8-719-991-33
Q110	M-13	#	8-729-424-02
R031	H-8	#	100
R114	G-11	#	220
R117	M-12	#	22K
R118	M-13	#	22K
R131	F-9	#	220
R132	G-9	#	4.7K
R139	F-9	#	220
R329	D-14	#	100
R452	A-21	#	220
R453	A-21	#	220

#: NOT MOUNTED

A BOARD IC VOLTAGE LIST

IC001		37	0.0	2	GND	30	5.9	2	3.1	10	4.5	6	2.5
PIN	VOLT	38	4.2	3	GND	31	5.5	3	4.9	11	4.5	7	-13.5
1	4.9	39	1.7	4	GND	32	7.6	4	2.4	12	4.5	8	12.0
2	0.6	40	2.6	5	5.0	33	3.6	5	GND	13	4.5	IC561	
3	GND	41	5.0	6	5.0	34	2.8	6	1.7	14	4.5	PIN	VOLT
4	5.0	42	5.0	7	0.0	35	2.5	7	2.6	15	0.6	1	1.5
5	0.2	43	0.2	8	5.0	36	3.9	8	GND	16	1.7	2	12.0
6	1.7	44	0.6	IC301		37	1.5	9	GND	17	1.7	3	-12.0
7	1.4	45	1.2	PIN	VOLT	38	1.6	10	GND	18	4.7	4	-15.0
8	0.5	46	4.8	1	5.0	39	1.5	11	4.9	19	4.7	5	0.3
9	N/C	47	N/C	2	GND	40	0.0	12	GND	20	GND	6	14.2
10	5.0	48	0.0	3	5.0	41	4.6	13	4.9	21	9.0	7	1.4
11	GND	49	0.1	4	N/C	42	4.6	14	GND	22	4.4	IC6008	
12	5.0	50	4.4	5	4.8	43	4.6	15	4.8	23	3.8	PIN	VOLT
13	2.3	51	5.0	6	5.0	44	9.0	16	4.7	24	3.8	I	7.5
14	GND	52	0.1	7	4.8	45	0.1	17	N/C	25	4.0	O	5.0
15	2.1	53	0.0	8	3.4	46	4.3	18	N/C	26	0.6	G	GND
16	5.0	54	4.8	9	5.2	47	5.2	19	2.4	27	4.6		
17	2.6	55	0.1	10	1.9	48	5.2	20	4.9	28	4.6		
18	2.6	56	0.0	11	0.0	49	GND	21	GND	29	4.6		
19	0.3	57	4.8	12	4.8	50	4.8	22	2.8	30	4.6		
20	0.0	58	N/C	13	9.0	51	5.2	23	2.8	31	4.6		
21	2.1	59	N/C	14	0.0	52	5.2	24	3.3	32	4.6		
22	N/C	60	0.0	15	N/C	53	9.1	25	4.1	33	4.6		
23	5.0	61	0.1	16	4.9	54	5.3	26	GND	34	N/C		
24	5.0	62	4.6	17	4.4	55	N/C	27	3.6	35	4.5		
25	5.0	63	N/C	18	GND	56	1.7	28	1.6	36	4.5		
26	5.0	64	N/C	19	N/C	57	N/C	IC400		37	4.5		
27	5.0	IC002		20	5.5	58	6.9	PIN	VOLT	38	4.5		
28	0.0	PIN	VOLT	21	3.6	59	N/C	1	4.5	39	4.5		
29	0.0	1	N/C	22	5.8	60	4.7	2	4.5	40	4.5		
30	0.0	2	GND	23	9.0	61	4.7	3	4.5	IC501			
31	N/C	3	GND	24	4.4	62	4.7	4	4.5	PIN	VOLT		
32	N/C	4	5.0	25	GND	63	1.1	5	4.5	1	-13.3		
33	N/C	5	5.0	26	4.1	64	5.1	6	4.5	2	8.2		
34	N/C	IC003		27	2.4	IC302		7	N/C	3	7.2		
35	0.0	PIN	VOLT	28	3.5	PIN	VOLT	8	4.5	4	-15.0		
36	0.0	1	GND	29	3.5	1	1.3	9	4.5	5	2.3		

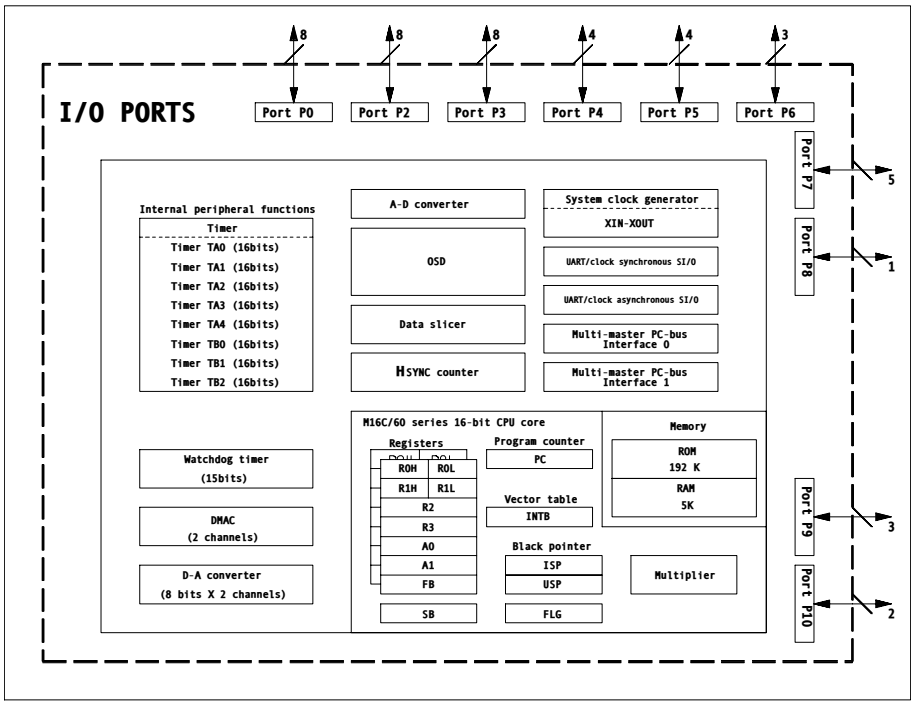
All voltages are in V.

A BOARD TRANSISTOR VOLTAGE LIST

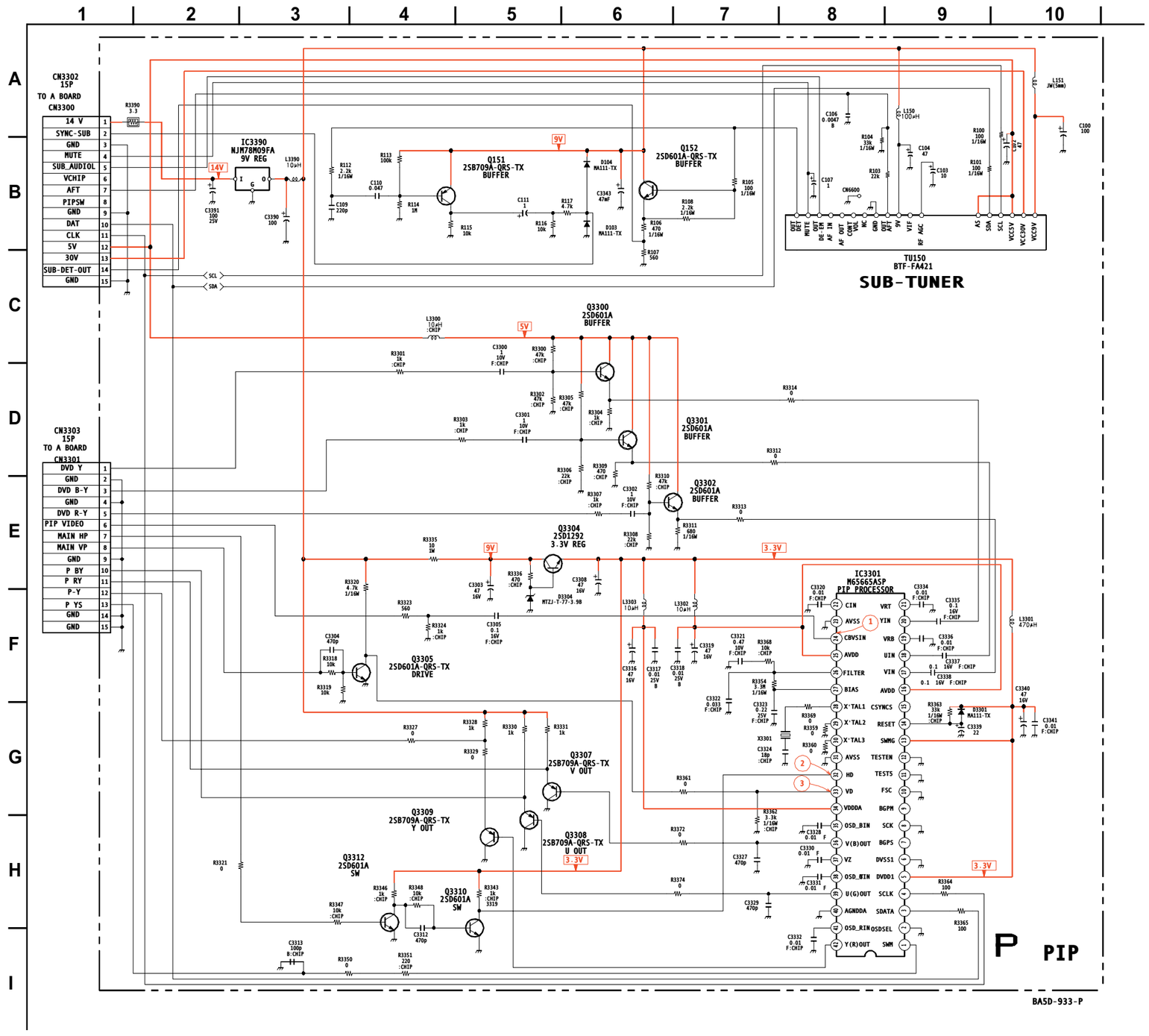
	B	C	E		B	C	E
Q001	0.0	0.4	5.0	**Q319**	0.6	0.6	GND
Q002	4.4	9.0	3.8	**Q320**	4.8	GND	5.4
Q003	0.7	0.0	GND	**Q321**	3.6	GND	4.3
Q004	0.0	4.3	GND	**Q402**	0.0	0.0	GND
Q005	0.1	4.9	GND	**Q403**	0.0	0.0	GND
Q010	4.3	GND	4.9	**Q407**	0.7	0.0	GND
Q110	4.8	0.0	5.0	**Q501**	0.0	123.6	GND
Q300	4.6	GND	5.2	**Q502**	0.0	131.8	GND
Q301	3.1	9.0	2.4	**Q507**	0.3	110.7	GND
Q302	2.7	GND	3.2	**Q511**	-13.5	-8.4	-15.0
Q303	5.0	9.0	4.4	**Q512**	-14.9	-2.0	-15.0
Q304	5.0	9.0	4.4	**Q530**	0.0	4.4	GND
Q305	5.0	0.0	3.4	**Q531**	4.4	0.0	4.4
Q306	2.0	9.0	2.3	**Q532**	133.6	0.0	133.8
Q307	1.5	GND	2.2	**Q561**	0.0	4.4	GND
Q308	1.5	GND	2.2	**Q562**	0.0	0.0	GND
Q309	1.5	GND	2.2	**Q590**	0.0	3.6	GND
Q313	4.1	GND	4.7	**Q6000**	0.6	1.2	GND
Q317	0.0	3.9	GND				

All voltages are in V.

IC001 BLOCK DIAGRAM



P BOARD SCHEMATIC DIAGRAM (KV-36FS200/38FS200 ONLY)



P BOARD IC VOLTAGE LIST

IC3301		11	GND	23	GND	35	0.8
PIN	VOLT	12	GND	24	0.9	36	0.8
1	0.2	13	3.3	25	3.3	37	2.3
2	GND	14	3.2	26	3.5	38	0.8
3	4.5	15	N/C	27	2.0	39	0.8
4	4.5	16	3.3	28	1.7	40	GND
5	3.3	17	1.0	29	GND	41	0.8
6	GND	18	1.0	30	GND	42	0.6
7	N/C	19	0.5	31	GND	IC3390	
8	GND	20	0.5	32	0.6	PIN	VOLT
9	N/C	21	1.6	33	0.0	I	14.0
10	GND	22	1.0	34	3.3	O	9.0
						G	GND

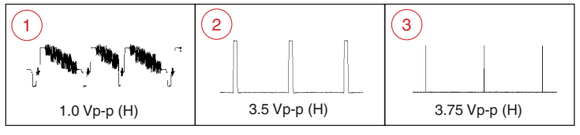
All voltages are in V.

P BOARD TRANSISTOR VOLTAGE LIST

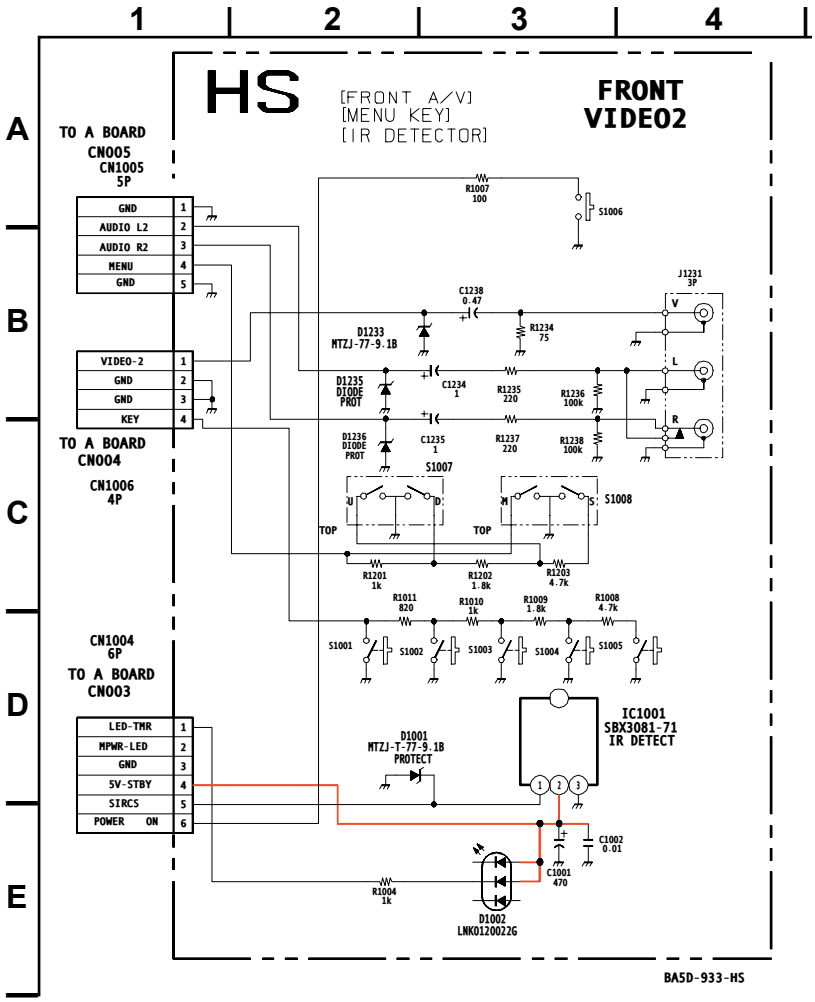
	B	C	E
Q151	8.4	4.5	9.0
Q152	3.9	9.0	3.2
Q3300	2.3	5.0	1.7
Q3301	1.4	5.0	0.8
Q3302	1.4	5.0	0.8
Q3304	3.9	9.0	3.3
Q3305	0.7	0.1	GND
Q3307	0.8	GND	1.5
Q3308	0.7	GND	1.4
Q3309	0.6	GND	1.3
Q3310	0.5	0.6	GND
Q3312	0.2	2.7	GND

All voltages are in V.

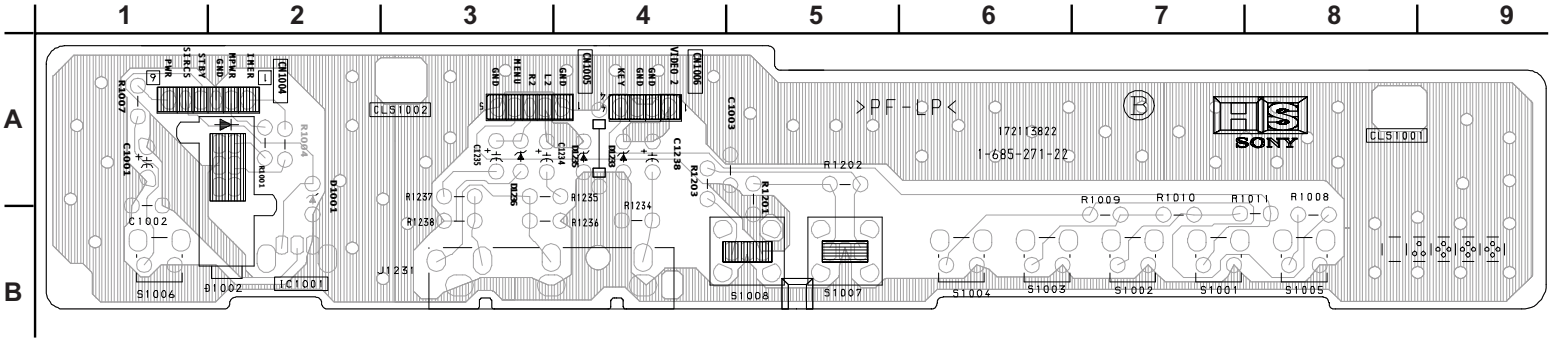
P BOARD WAVEFORMS



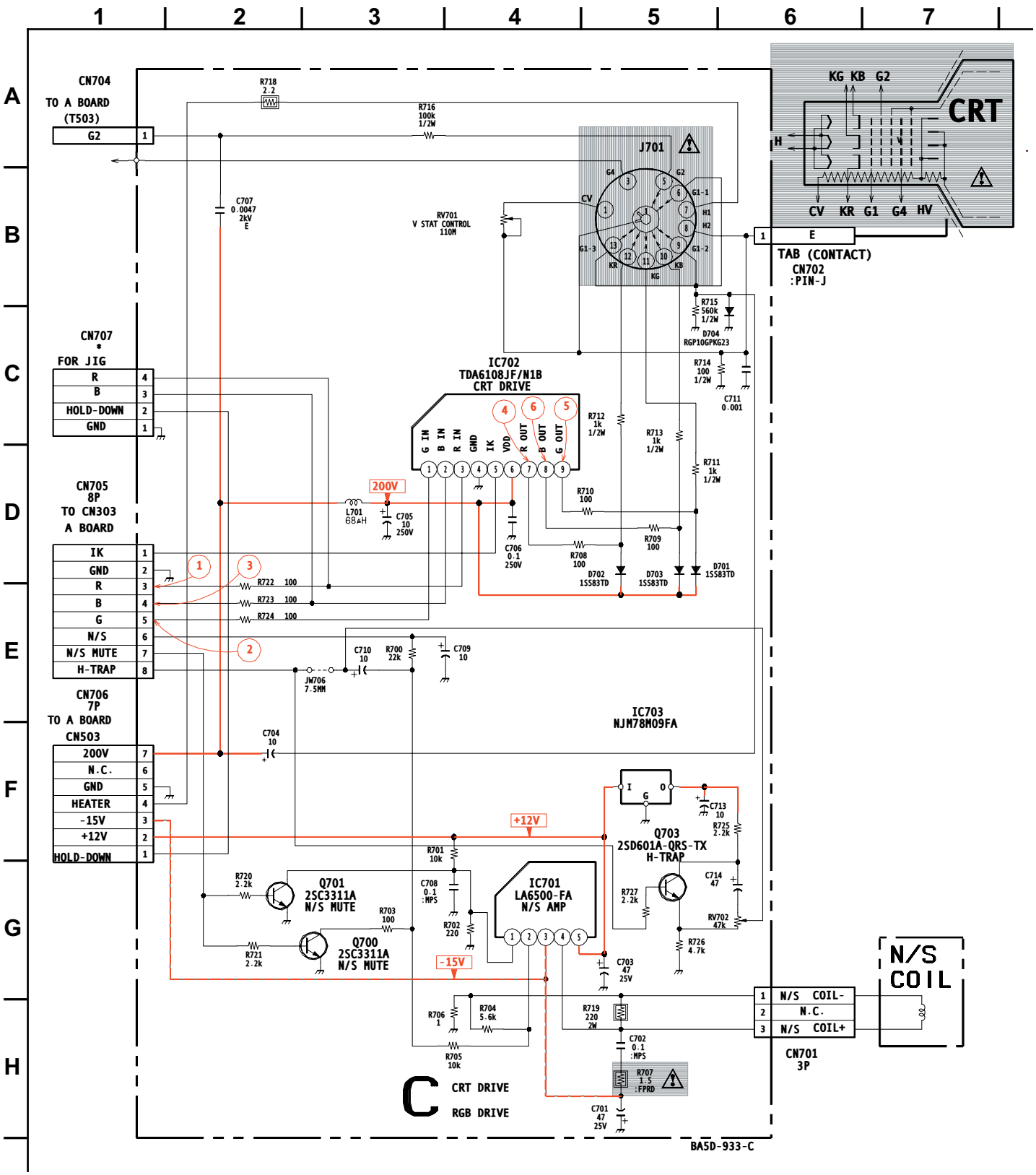
HS BOARD SCHEMATIC DIAGRAM



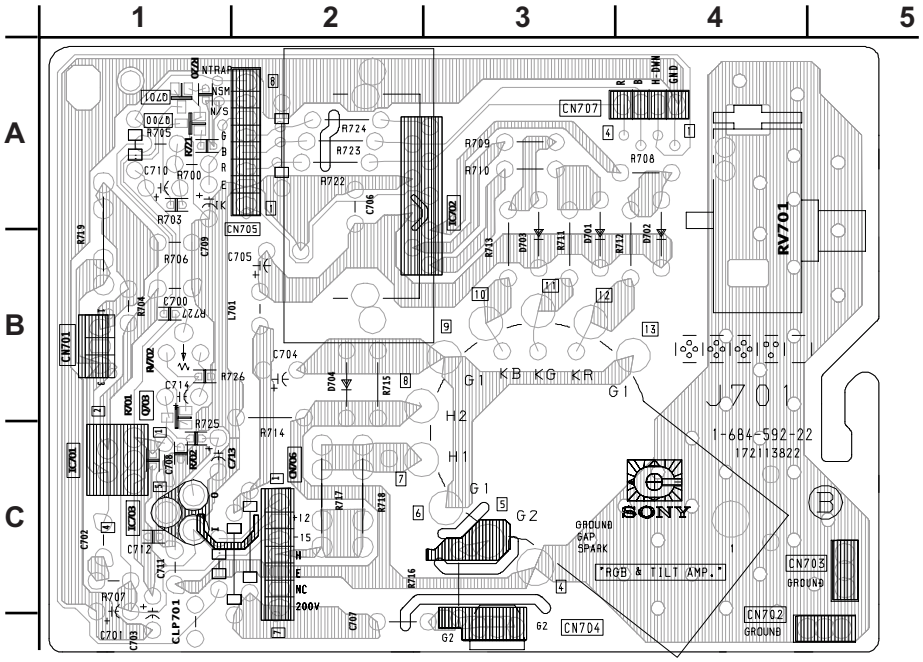
HS [SIRCS, LEDS, MAIN POWER BUTTON]



C BOARD SCHEMATIC DIAGRAM



C [RGB DRIVE, CRT DRIVE]

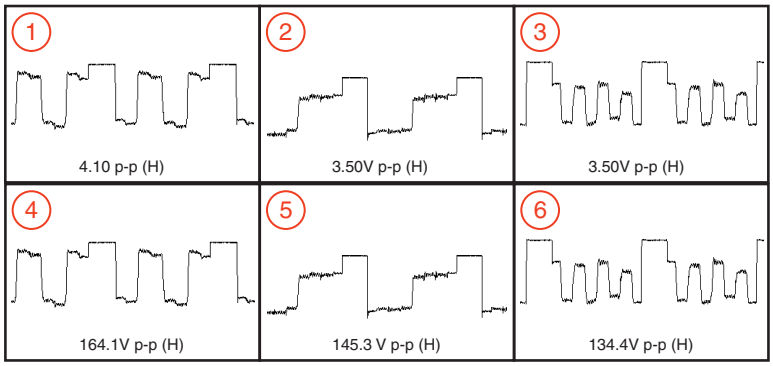


C BOARD IC VOLTAGE LIST

IC701	
PIN	VOLT
1	0.3
2	0.3
3	-13.0
4	0.5
5	12.0
IC702	
PIN	VOLT
1	2.2
2	2.2
3	2.2
4	GND
5	5.0
6	200.0
7	139.7
8	142.0
9	138.6
IC703	
PIN	VOLT
I	12.0
O	7.0
G	GND

All voltages are in V.

C BOARD WAVEFORMS

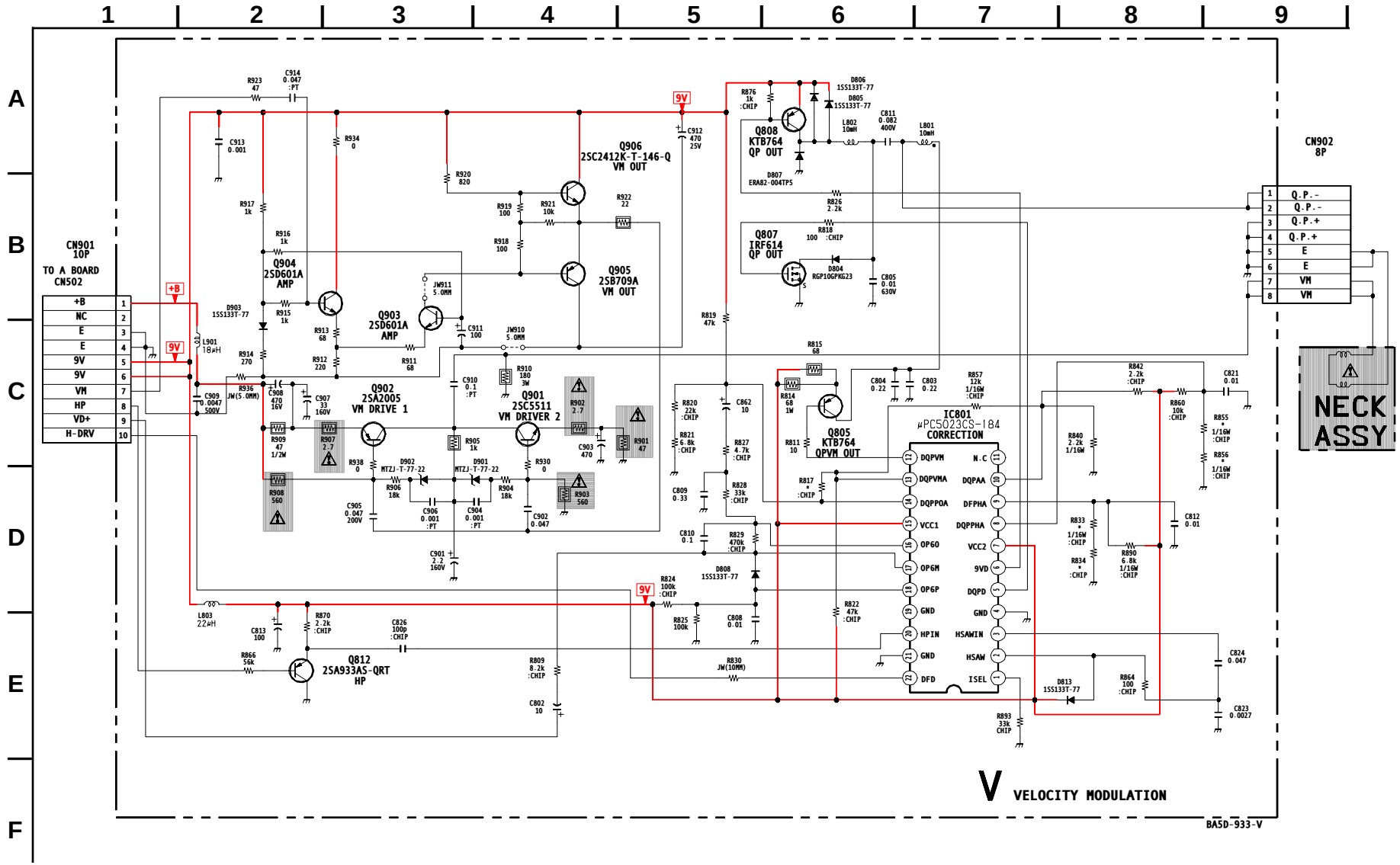


C BOARD TRANSISTOR VOLTAGE LIST

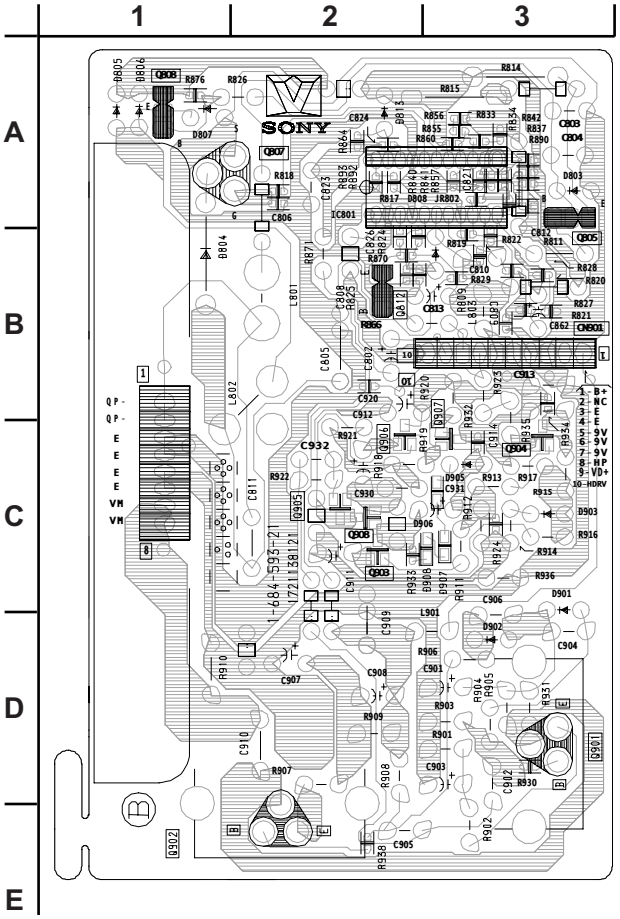
	B	C	E
Q700	0.3	0.8	GND
Q701	0.3	0.3	GND
Q703	4.0	5.0	0.1

All voltages are in V.

V BOARD SCHEMATIC DIAGRAM



V [VELOCITY MODULATION]



V BOARD IC VOLTAGE LIST

IC801		11	N/C
PIN	VOLT	12	3..5
1	7.4	13	3.8
2	2.3	14	4.5
3	4.8	15	9.0
4	GND	16	4.6
5	6.3	17	4.6
6	4.5	18	4.5
7	9.0	19	N/C
8	5.8	20	4.8
9	4.6	21	GND
10	4.8	22	0.3

All voltages are in V.

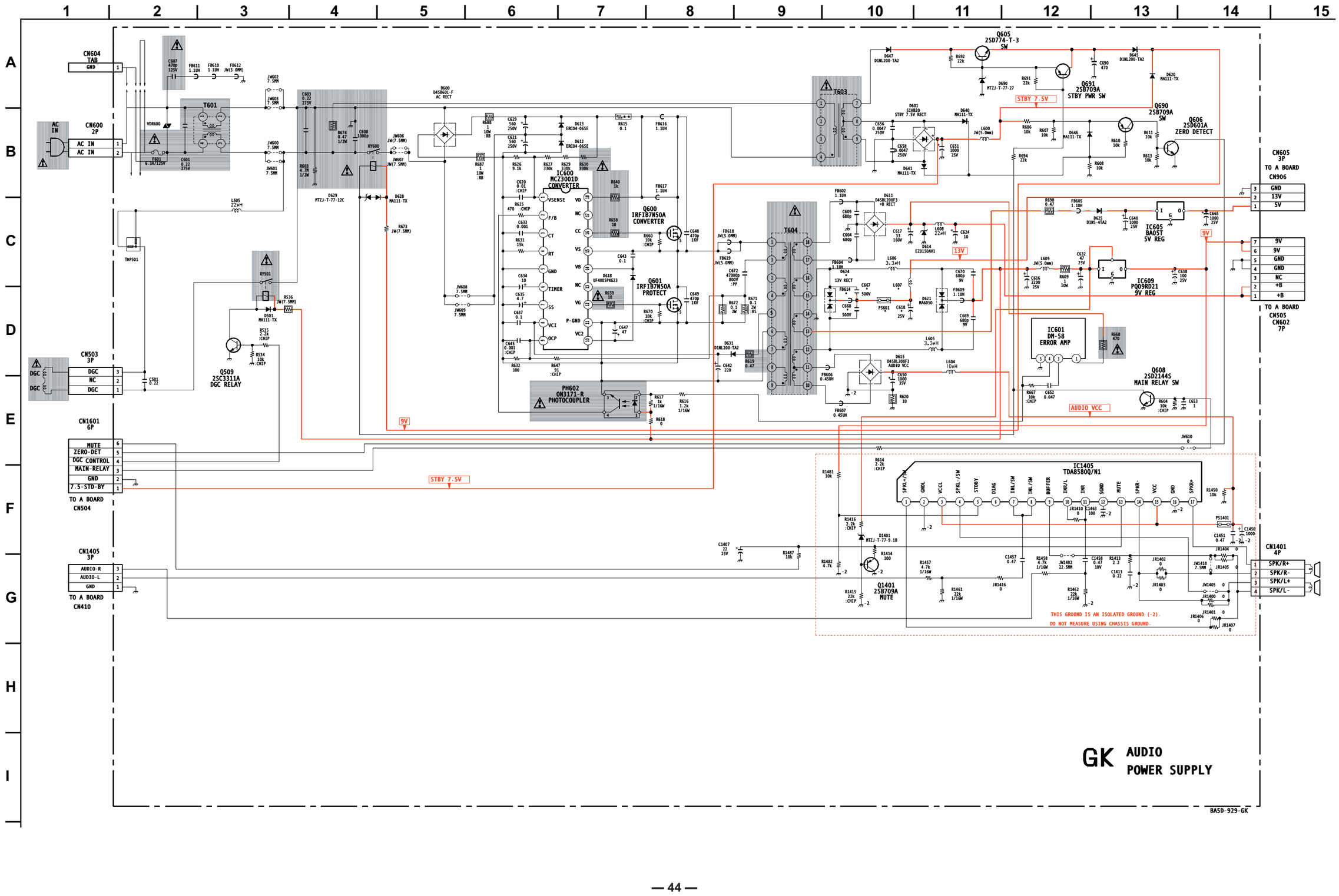
V BOARD TRANSISTOR VOLTAGE LIST

	B	C	E
Q805	3.5	1.8	4.2
Q808	8.6	4.3	9.0
Q812	1.3	GND	2.0
Q901	1.4	67.0	0.8
Q902	132.9	67.0	133.4
Q903	1.2	6.2	1.8
Q904	1.2	8.8	1.8
Q905	7.1	0.0	6.7
Q906	7.4	9.0	7.1

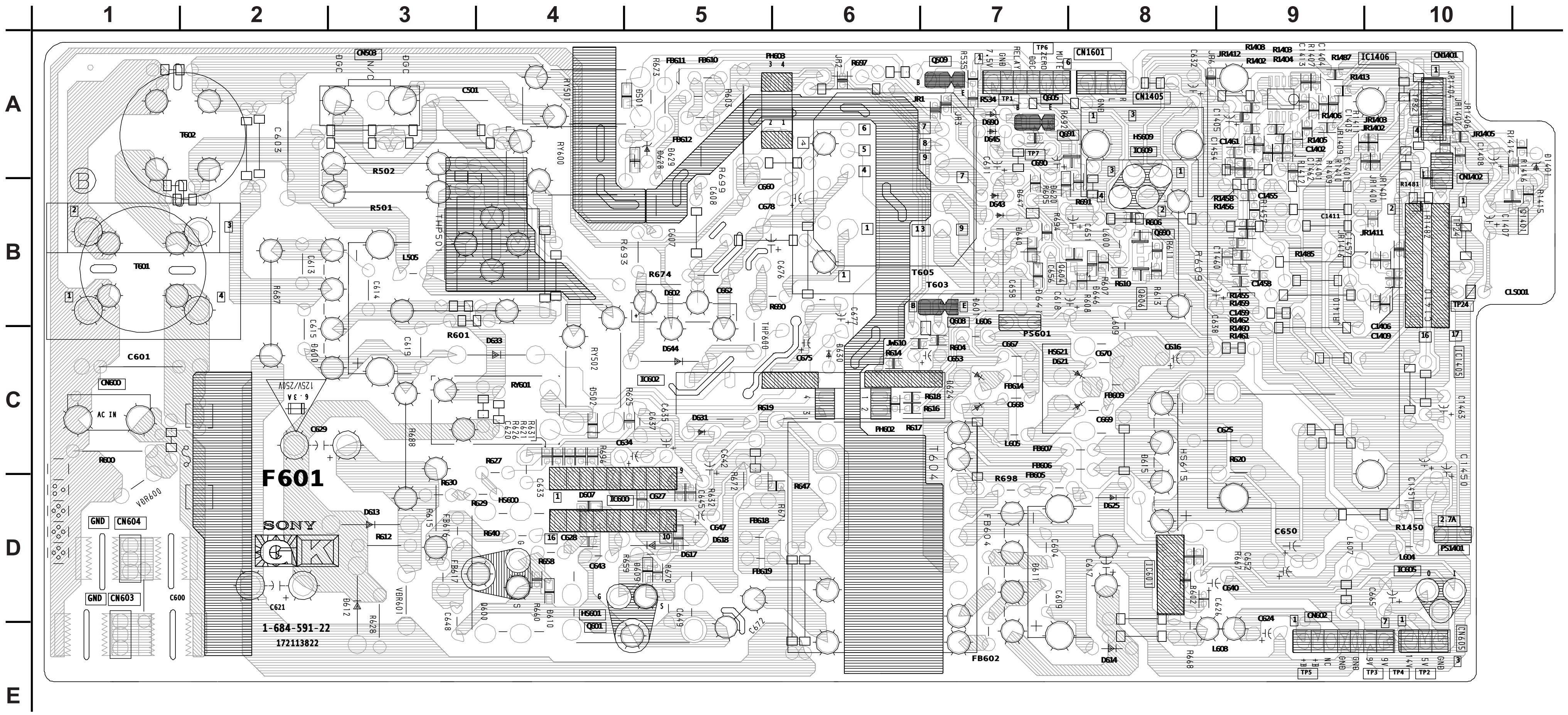
	D	G	S
Q807	9.5	6.3	GND

All voltages are in V.

GK BOARD SCHEMATIC DIAGRAM



GK [POWER SUPPLY, AUDIO]



GK BOARD LOCATOR LIST

DIODE		IC	
D501	A-5	IC600	D-5
D600	C-2	IC601	D-8
D601	C-7	IC605	D-10
D611	D-7	IC609	A-8
D612	D-3	IC1405	C-10
D613	D-3	**TRANSISTOR**	
D614	E-8	Q509	A-7
D615	C-8	Q600	D-4
D618	D-5	Q601	E-4
D620	B-7	Q605	A-7
D621	C-8	Q606	B-8
D624	C-7	Q608	C-7
D625	D-8	Q690	B-8
D628	A-5	Q691	A-8
D629	A-5	Q1401	B-11
D631	C-5		
D640	B-7		
D641	C-7		
D645	A-7		
D646	C-8		
D647	B-7		
D690	A-7		
D1401	A-11		

GK BOARD MARK(*) LIST

REF. NO.	LOCATION	KV-36FS100	KV-36FS200 38FS200(N)
C618	D-10	#	2200UF 25V
C667	C-10	#	680PF 500V
C668	D-10	#	680PF 500V
D624	C-10	#	8-719-510-12
FB614	D-10	#	1.1UH
L607	C-10	#	10UH
PS601	D-10	#	1-576-337-21

#: NOT MOUNTED

GK BOARD IC VOLTAGE LIST

IC600		11	-157.1	3	2.4	G	GND	10	4.0
PIN	**VOLT**	12	-152.3	4	8.4	**IC1405**		11	3.9
1	-154.0	13	N/C	5	GND	**PIN**	**VOLT**	12	GND
2	-155.0	14	7.0	**IC605**		1	10.1	13	0.4
3	-154.8	15	-2.6	**PIN**	**VOLT**	2	GND	14	9.9
4	-154.4	16	1.9	I	6.1	3	14.0	15	14.0
5	-157.1	17	N/C	O	5.0	4	10.1	16	GND
6	-156.9	18	156.8	G	GND	5	2.9	17	9.9
7	-150.2	**IC601**		**IC609**		6	N/C		
8	-138.8	**PIN**	**VOLT**	**PIN**	**VOLT**	7	4.0		
9	-157.1	1	134.6	I	10.5	8	4.0		
10	-146.9	2	N/C	O	9.0	9	11.0		

All voltages are in V.

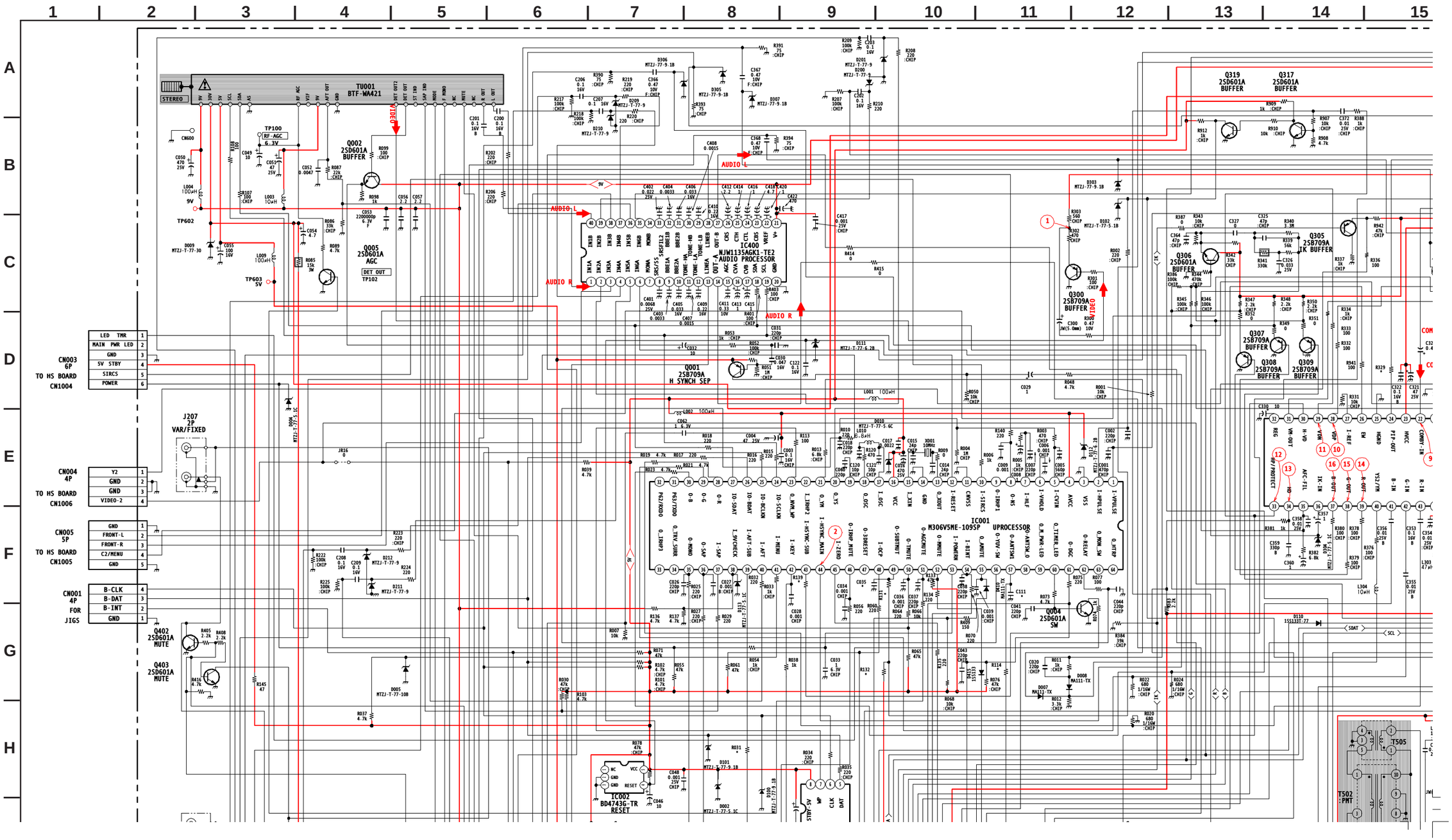
GK BOARD TRANSISTOR VOLTAGE LIST

	B	C	E
Q509	0.3	10.5	GND
Q605	7.6	18.8	7.6
Q606	0.0	0.5	GND
Q608	0.6	0.0	GND
Q690	6.1	0.5	5.9
Q691	6.9	7.6	7.6
Q1401	0.0	GND	0.6

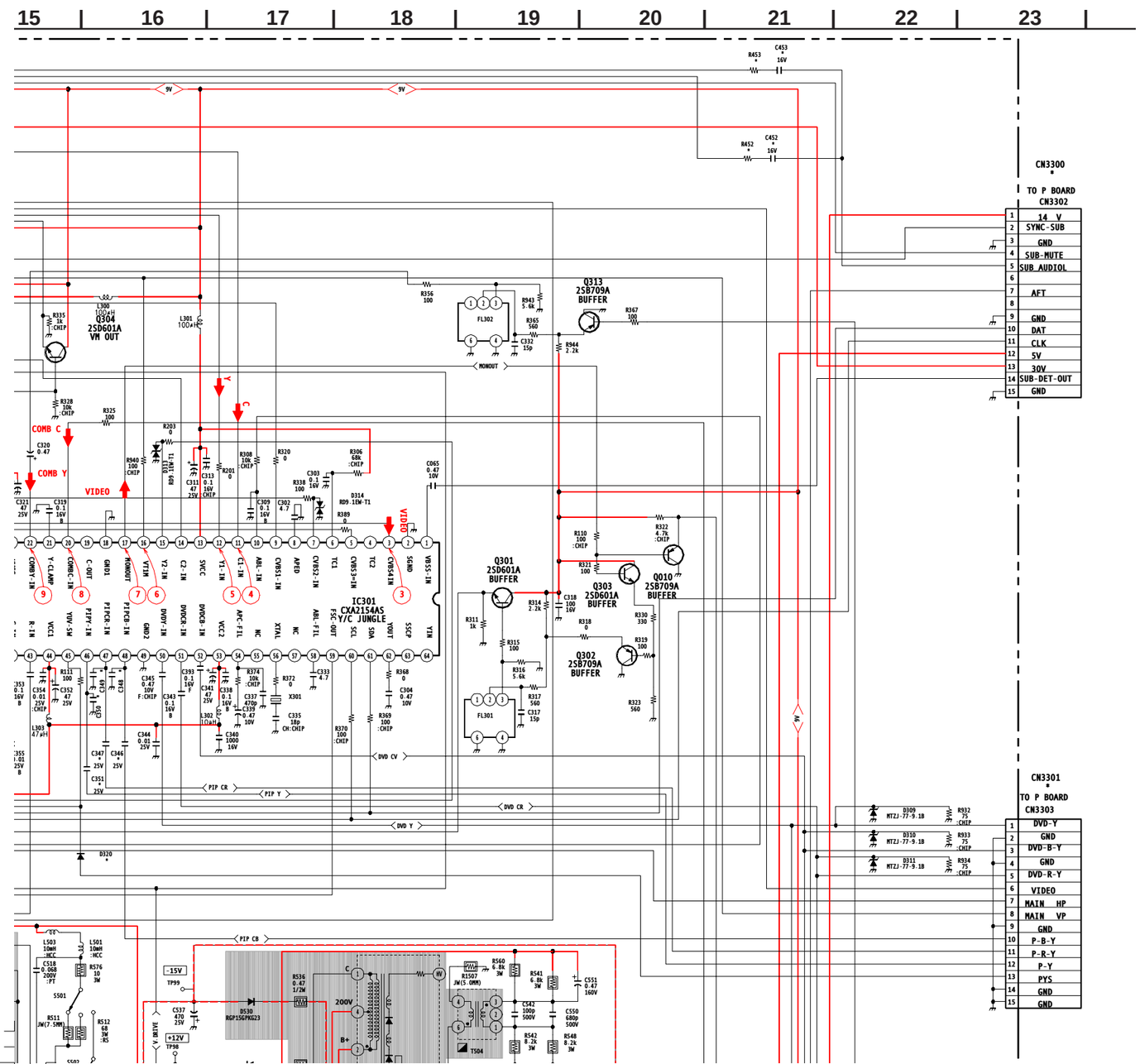
	D	G	S
Q600	156.9	2.5	-2.5
Q601	-2.6	-152.8	-157.4

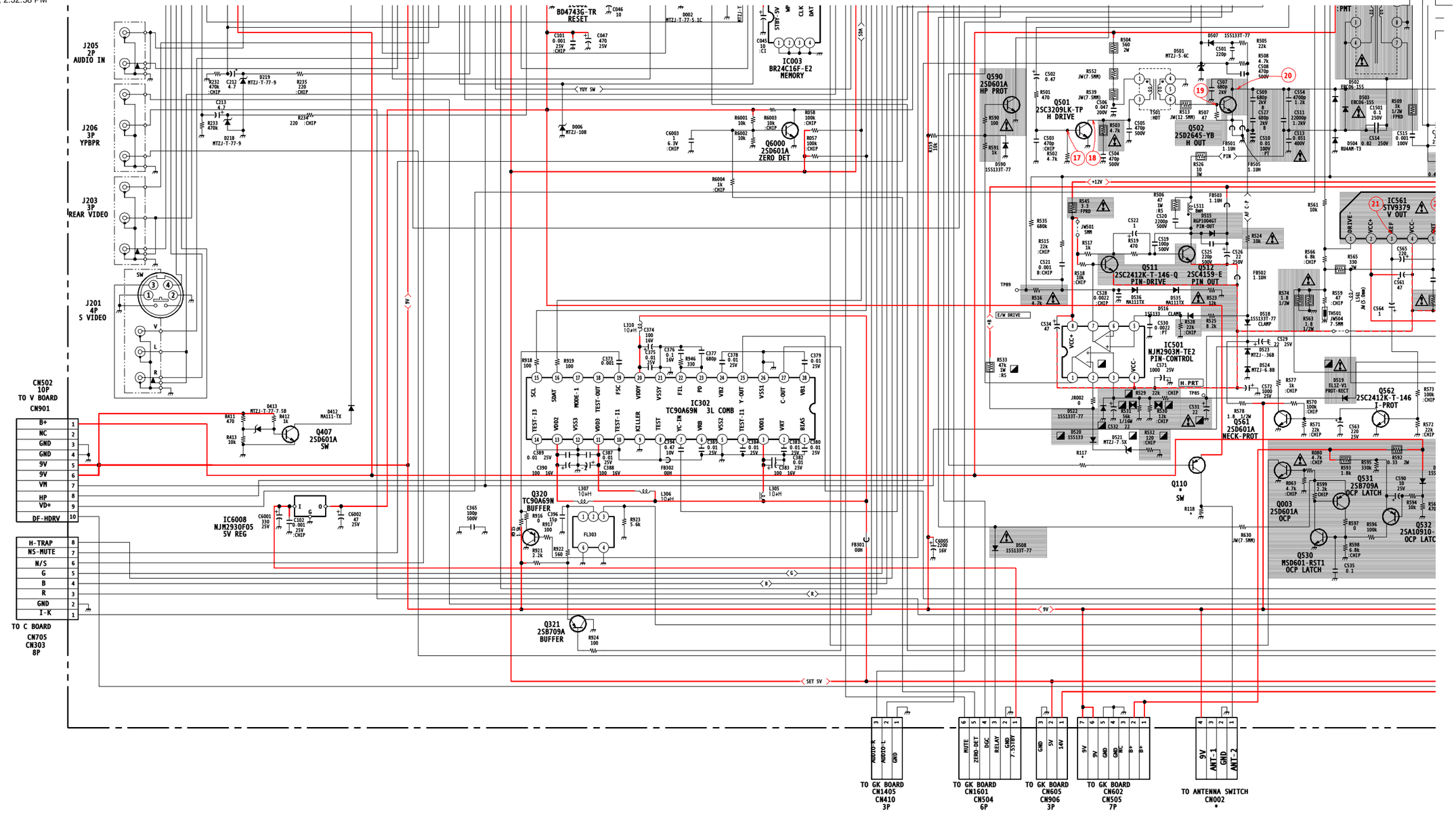
All voltages are in V.

A BOARD SCHEMATIC DIAGRAM

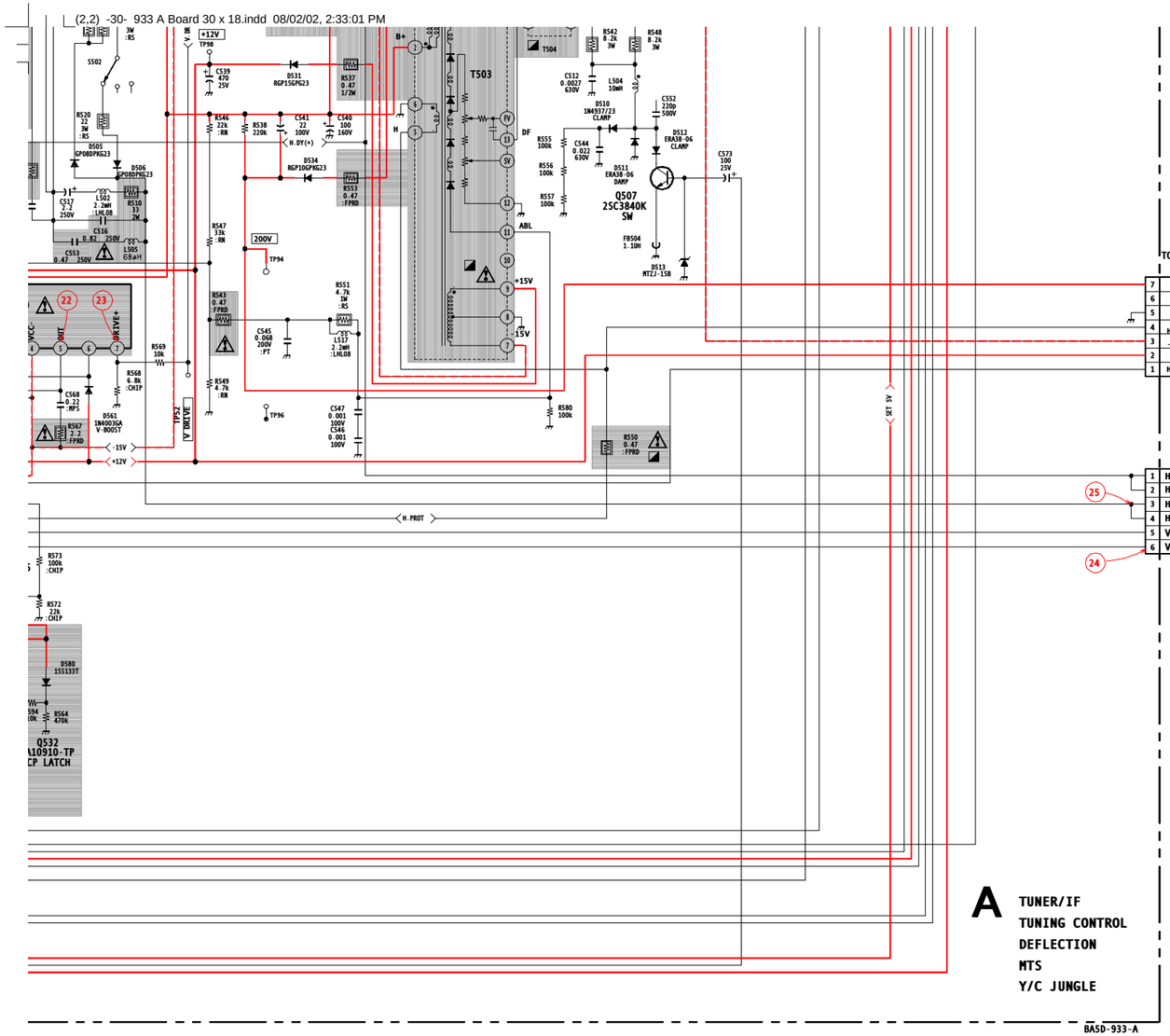


(2,1) -30- 933 A Board 30 x 18.indd 08/02/02, 2:32:55 PM




J205
2P
AUDIO IN
J206
3P
YPBPR
J203
3P
REAR VIDEO
J201
4P
S VIDEO
CN502
10P
TO V BOARD
CN901
B+
NC
GND
GND
9V
9V
VM
HP
VD+
DF-HDRV
H-TRAP
NS-MUTE
N/S
G
B
R
GND
I-K
TO C BOARD
CN705
CN303
8P
BD4743G-TR
RESET
IC003
BR24C16F-E2
MEMORY
Q590
2SD601A
HP PROT
Q501
2SC3209LK-TP
H DRIVE
Q502
2SD2645-YB
H OUT
Q6000
2SD601A
ZERO DET
IC6008
NJM2930F05
5V REG
IC302
TC90A69N 3L COMB
Q320
TC90A69N
BUFFER
Q321
2SB709A
BUFFER
Q407
2SD601A
SW
IC501
NJM2903M-TE2
PIN-CONTROL
Q511
2SC2412K-T-146-Q
PIN-DRIVE
Q512
2SC4159-E
PIN OUT
IC561
STV9379
V OUT
Q562
2SC2412K-T-146
I-PROT
Q561
2SD601A
NECK-PROT
Q110
SW
Q003
2SD601A
OCP
Q531
2SB709A
OCP LATCH
Q530
MSD601-RST1
OCP LATCH
Q532
2SA10910-
OCP LATC
TO GK BOARD
CN1405
CN410
3P
TO GK BOARD
CN1601
CN504
6P
TO GK BOARD
CN605
CN906
3P
TO GK BOARD
CN602
CN505
7P
TO ANTENNA SWITCH
CN002
+12V
9V
SET 5V
E/W DRIVE
H.PRT
YUV SW
PIN
PMT

(2,2) -30- 933 A Board 30 x 18.indd 08/02/02, 2:33:01 PM



SERVICE MANUAL BA-5D CHASSIS

MODEL NAME	REMOTE COMMANDER	DESTINATION	CHASSIS NO.
KV-36FS100	RM-Y180	US	SCC-S65H-A
KV-36FS100	RM-Y180	CND	SCC-S64F-A
KV-36FS100	RM-Y180	HAWAII	SCC-S67B-A
KV-36FS200	RM-Y181	US	SCC-S65J-A
KV-36FS200	RM-Y181	HAWAII	SCC-S67V-A
KV-38FS200	RM-Y181	LATIN NORTH	SCC-S62M-A

CORRECTION - 1

SUBJECT: REPLACED GK BOARD IC VOLTAGE LIST (IC600)
REPLACED GK BOARD TRANSISTOR VOLTAGE LIST (Q600, Q601)

Correct the service manual as shown.
File this Correction with the service manual.

☛ : Corrected Items

SECTION 5: DIAGRAMS

5-3. BLOCK DIAGRAM AND SCHEMATICS
GK Board IC Voltage List (Page 45)
GK Board Transistor Voltage List (Page 45)

TRINITRON® COLOR TELEVISION

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9-965-933-91

SECTION 5: DIAGRAMS

5-3. BLOCK DIAGRAM AND SCHEMATICS (Page 45)

GK BOARD IC VOLTAGE LIST

IC600		11	0.0	3	2.4	G	GND	10	4.0
PIN	**VOLT**	12	4.9	4	8.4	**IC1405**		11	3.9
1	2.8	13	NC	5	GND	**PIN**	**VOLT**	12	GND
2	1.9	14	163.9	**IC605**		1	10.1	13	0.4
3	2.3	15	153.8	**PIN**	**VOLT**	2	GND	14	9.9
4	2.6	16	158.2	I	6.1	3	14.0	15	14.0
5	GND	17	NC	O	5.0	4	10.1	16	GND
6	0.0	18	340.0	G	GND	5	2.9	17	9.9
7	4.6	**IC601**		**IC609**		6	N/C		
8	17.5	**PIN**	**VOLT**	**PIN**	**VOLT**	7	4.0		
9	0.0	1	134.6	I	10.5	8	4.0		
10	10.6	2	N/C	O	9.0	9	11.0		

All voltages are in V.

GK BOARD TRANSISTOR TABLE

	B	C	E
Q509	0.3	10.5	GND
Q605	7.6	18.8	7.6
Q606	0.0	0.5	GND
Q608	0.6	0.0	GND
Q690	6.1	0.5	5.9
Q691	6.9	7.6	7.6
Q1401	0.0	GND	0.6

	D	G	S
Q600	340.0	160.0	156.0
Q601	155.0	4.9	0.0

All voltages are in V.

Sony Corporation
Sony Technology Center
Technical Services
Service Promotion Department

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